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ABSTRACT

Divided into seven sections, this report contains: (1) data delineating the population of postsecondary-degree-planning candidates, by native country and Test of English as a Foreign Language (TOEFL) region; (2) differences among native country contingents with respect to degree level, age, sex, and all other basic TOEFL variables, except TOEFL scores; (3) variation on mean TOEFL score profiles for degree-planning candidates, by level of planned degree program, and by country; (4) variation in TOEFL means in relation to sex, location of test center, previous experience with TOEFL, and score repeating patterns; (5) distribution of graduate-degree planners according to intended department of study, and corresponding TOEFL score statistics; (6) patterns of native languages by native country; and (7) summary data on differences among native country groups with respect to basic TOEFL variables, and the extent of covariation across native country contingents between indices descriptive of TOEFL candidate contingents and indices of the standing of countries on indices of relative status as developed vs developing. Emphasis is on native country as the unit of analysis and on the comparative assessment of data on candidate characteristics and TOEFL performance by country of origin. (PN)

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TOEFL Research Reports

REPORT 11
SEPTEMBER 1982

A COMPARATIVE ANALYSIS OF TOEFL EXAMINEE CHARACTERISTICS, 1977-1979

Kenneth M. Wilson

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TOEFL
EDUCATIONAL TESTING SERVICE

The Test of English as a Foreign Language (TOEFL) was developed in 1963 by a National Council on the Testing of English as a Foreign Language, which was formed through the cooperative effort of over thirty organizations, public and private, that were concerned with testing the English proficiency of non-native speakers of the language applying for admission to institutions in the United States. In 1965, Educational Testing Service (ETS) and the College Board assumed joint responsibility for the program and in 1973 a cooperative arrangement for the operation of the program was entered into by ETS, the College Board, and the Graduate Record Examinations (GRE) Board. The membership of the College Board is composed of schools, colleges, school systems, and educational associations; GRE Board members are associated with graduate education.

ETS administers the TOEFL program under the general direction of a Policy Council that was established by, and is affiliated with, the sponsoring organizations. Members of the Policy Council represent the College Board and the GRE Board and such institutions and agencies as graduate schools of business, junior and community colleges, nonprofit educational exchange agencies, and agencies of the United States government.

A continuing program of research related to TOEFL is carried out under the direction of the TOEFL Research Committee. Its six members include representatives of the Policy Council, the TOEFL Committee of Examiners, and distinguished English-as-a-second-language specialists from the academic community. Currently the committee meets twice yearly to review and approve proposals for test-related research and to set guidelines for the entire scope of the TOEFL research program. Members of the Research Committee serve three-year terms at the invitation of the Policy Council; the chair of the committee serves on the Policy Council.

Because the studies are specific to the test and the testing program, most of the actual research is conducted by ETS staff rather than by outside researchers. However, many projects require the cooperation of other institutions, particularly those with programs in the teaching of English as a foreign or second language. Representatives of such programs who are interested in participating in or conducting TOEFL-related research are invited to contact the TOEFL program office. Local research may sometimes require access to TOEFL data. In such cases, the program may provide this data following approval by the Research Committee. All TOEFL research projects must undergo appropriate ETS review to ascertain that the confidentiality of data will be protected.

Current (1981-82) members of the TOEFL Research Committee include the following:

G. Richard Tucker (chair)	Center for Applied Linguistics
Louis A. Arena	University of Delaware
H. Douglas Brown	University of Illinois at Urbana-Champagne
Frances B. Hinofotis	University of California at Los Angeles
Diane Larsen-Freeman	The Experiment in International Living
David S. Sparks	University of Maryland

A Comparative Analysis of TOEFL Examinee Characteristics, 1977-1979

Kenneth M. Wilson

(with the collaboration of Richard H. Harrison)

Educational Testing Service
Princeton, New Jersey

RR 82-27

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INTRODUCTION AND OVERVIEW OF MAJOR FINDINGS

The major purpose of the Test of English as a Foreign Language (TOEFL) is to assess the English proficiency of individuals whose native language is not English. TOEFL is administered under four separate testing programs: the International, Special Center, Institutional, and Overseas Institutional testing programs. The Institutional and Overseas Institutional programs involve internal administration of TOEFL by institutions to their enrolled students; scores are used primarily for placement in English courses or for determining whether remedial work in ESL is needed.

International and Special Center administrations, which are offered in over 850 testing centers located in more than 135 countries and areas, provide for testing under controlled, secure conditions. These programs are used primarily to provide an objective measure of English proficiency for international students whose native language is not English who plan to enter colleges or universities located in the United States or Canada.* During the two-year period from September 1978 through August 1980, for example, almost 416,000 examinees (some 88 percent of total TOEFL volume for the period) reported plans to study for a postsecondary degree.

This report presents findings of a study, using data from TOEFL program files, of the characteristics and the TOEFL performance of foreign nationals from more than 100 countries who took TOEFL from September 1977 through August 1979 and reported that they were doing so to implement plans to study in the United States or Canada. As part of the process of taking TOEFL, candidates supply information regarding their reasons for taking TOEFL and their native countries. This information provides a basis for classifying TOEFL candidates by country of origin and identifying those who are prospective postsecondary students. Other data in TOEFL program files permit a more detailed description of the personal and academic characteristics of these prospective students in various country contingents and insight into their behavior as TOEFL candidates--i.e., individuals who need to demonstrate their proficiency in English as part of the process of applying for admission to undergraduate or graduate degree programs in the U.S.A. or Canada.

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*The TOEFL programs involved also serve individuals who need to demonstrate their English proficiency for other reasons, including those related to professional licensure or employment. Other reasons for taking TOEFL, which candidates are asked to specify, are "to enter a school other than a college or university," "to become licensed to practice my profession in the USA or Canada," "to demonstrate my proficiency in English to the company for which I work or expect to work," or "other than above."

Candidate Data from Program Files

In addition to information about native country and reasons for taking TOEFL, TOEFL candidates are asked to indicate their sex, date of birth, native language, and whether they have taken TOEFL previously. Candidates who wish to have official copies of their TOEFL scores sent to postsecondary institutions, agencies (e.g., Agency for International Development, Institute of International Education), and/or embassies, may designate up to three such score report recipients.* If applying for graduate study, they are also instructed to indicate a department (field) of intended study. The location of the test center in which a candidate took TOEFL can also be determined from TOEFL files, providing a basis for classifying candidates according to country of residence when the test was taken. And, of course, scores on TOEFL are available.

Thus, data are available in TOEFL program files on a number of personal and academic characteristics of TOEFL candidates as well as on variables descriptive of their behavior as test candidates and as prospective applicants for admission to U.S. or Canadian higher education institutions, as follows:

- Sex
- Age at time of most recent testing
- Native language
- Country of residence at time of most recent testing
- Level of intended degree program and, for graduate-level aspirants, intended department (field) of study
- Previous TOEFL testing
- Pattern of score reporting (designating or not designating institutions/agencies as score report recipients)
- Scores on TOEFL (section and total scores)

About This Report

This report details analyses involving the variables outlined above for TOEFL candidates in the International and Special Center programs who tested during the period from September 1977 through August 1979 and who, according to their designated reasons for taking TOEFL, were classifiable as prospective applicants for admission to undergraduate or graduate degree programs in the United States or Canada. Emphasis is on native

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*In the period covered by this report, candidates could designate up to four official score report recipients.

country as the unit of analysis and on the comparative assessment of data on candidate characteristics and TOEFL performance by country of origin.*

Section 1 provides data delineating the population of postsecondary-degree-planning candidates, by native country and TOEFL region; Section 2 examines differences among native country contingents with respect to degree level, age, sex, and all other basic TOEFL variables, except TOEFL scores; Section 3 considers variation on mean TOEFL score profiles for degree-planning candidates, by level of planned degree program, by country; Section 4 examines variation in TOEFL means in relation to sex, location of test center, previous experience with TOEFL, and score reporting patterns; Section 5 presents data on the distribution of graduate-degree planners according to intended department (field) of study, and corresponding TOEFL score statistics; Section 6 presents data on patterns of native languages by native country with emphasis on identifying the major language groups for each native country; Section 7 provides summary data on differences among native country groups with respect to basic TOEFL variables and examines the extent of covariation across native country contingents between indices descriptive of TOEFL candidate contingents (e.g., sex distribution, mean TOEFL scores) and indices of the standing of countries on indices of relative status as "developed" vs "developing" (e.g., literacy rates, higher education enrollment rates at the beginning of the 1970s).

Some Limiting Considerations

In evaluating the findings for native country contingents, it is important to keep in mind that samples of degree-planning TOEFL candidates are not selected in the same way in different countries and that they are not necessarily a representative cross-section of the indigenous postsecondary student populations of their respective native countries with respect to variables such as age, sex, distribution according to degree level, capacity to develop English language proficiency, or other variables. As the TOEFL Test and Score Manual (1981) indicates, in some countries virtually any individual who aspires to study in the United States (or elsewhere) may take TOEFL in pursuit of that aspiration, whereas in others government regulations may permit only selected individuals at certain educational levels in specialized fields of study to do so, depending upon perceived national interest.

It is also useful to recognize that classification by reported "native country" does not take into account the consequences of migration;

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*In a companion report, data on the same population of candidates are presented with emphasis on detailed assessment of candidate characteristics within each of 138 native country contingents (Wilson, 1982).

native country is not necessarily synonymous with country of citizenship at time of testing, for example, nor can it be assumed that all individuals designating a given native country were reared and educated in that country. Information required to assess these variables in the TOEFL candidate population is not available in the TOEFL testing files.

Given these considerations, the reader should keep in mind that the information reported herein is descriptive only of individuals selected into TOEFL candidacy from the respective native countries who indicated specific reasons for taking TOEFL. To the extent that the complex pattern of factors that operates to influence the selection of individuals into TOEFL candidacy remains reasonably stable over time, observed differences among country contingents with respect to candidate characteristics (such as average TOEFL scores, sex mix, undergraduate-graduate mix) may be thought of as indicating real differences in the populations of individuals from these countries who take TOEFL as part of the process of applying for admission to postsecondary institutions in the United States or Canada.

Overview of Major Findings

During the period from September 1977 through August 1979, some 283,000 individuals took TOEFL one or more times in the International and Special Center testing programs and designated "native countries." Of this number, 235,738 indicated entering a college or university as an undergraduate or a graduate student as a reason for taking TOEFL, and indicated further that they planned to study for a degree in the United States or Canada. The population of "prospective postsecondary degree seekers" (thus defined) represented about 83 percent of all test takers during the period who designated native countries; the remaining 17 percent gave other reasons for taking TOEFL, failed to indicate a reason, or did not report plans to seek a degree in the United States or Canada.

- 163 countries were named as native countries by at least two degree planners; 25 were named by fewer than 10, and 25 by 1,900 or more. The 25 leading country contingents accounted for 84 percent of all degree planners.

- Five countries accounted for almost 54 percent of of all degree planners; Asian and Mideastern countries accounted for 50 percent and 23 percent, respectively.

- The percentage of test takers who planned postsecondary study in the U.S.A or Canada as reasons for taking TOEFL varied considerably across country contingents--from 27 to 97 percent.

- Of the 25 leading countries of origin of degree planners, 23 were among the leading 30 countries of origin of foreign students enrolled in U.S. colleges during 1978-79.

Academic, Demographic, and Testing-Related Characteristics of Degree-Planning Examinees*

- About half (50.7 percent) of all degree planners were prospective undergraduate students and about half (49.3 percent) were prospective graduate students. The undergraduate/graduate division ranged, in percent, from 89/11 to 15/85 across the 25 leading country contingents.

- Almost one-third (32 percent) reported that they had taken TOEFL previously, i.e., were repeaters; repeater percentages ranged from 4 to 55.

- More than seven in 10 (72 percent) were male; the male/female division ranged in percent from 94/6 to 53/47.

- Almost three in 10 (29 percent) were tested in the United States or Canada (in a domestic center); the percent tested domestically ranged from 6 to 66.

- The typical undergraduate planner was over 20 years of age (median = 20.6, mean = 21.4), and the typical graduate planner was over 25 years of age (median = 25.1, mean = 26.3) at time of most recent testing. Across countries, the mean age of undergraduate planners ranged from 19.6 to 23.8, and for graduate planners the range was from 23.3 to 32.6 years.

- Fully 50 percent of degree planners failed to designate any receiving institutions for score reports which, accordingly, were sent only to the examinees involved; nonreporting ranged from 25 to 70 percent. Only 43 percent of degree planners designated U.S. higher education institutions to receive their score reports.

Performance on TOEFL in Relation to Academic, Demographic, and Testing-Related Variables

- Graduate planners had higher TOEFL total means than undergraduate planners (511 and 499, respectively)--true for 18 of the 25 leading contingents. For the seven contingents with higher

*Unless otherwise indicated, the range of values reported is for the 25 leading countries.

undergraduate than graduate means on TOEFL total, differences were accounted for primarily by undergraduate superiority on Listening Comprehension. More generally, in 19 of the 25 largest contingents, Listening means for undergraduate planners were higher than those for graduate planners.

However, in only one instance were undergraduates superior on Reading Comprehension; Reading Comprehension items are more like those of standardized tests of verbal ability in English than those in the Listening section. Why undergraduate (typically younger) degree planners should tend to outperform graduate planners on Listening Comprehension is not immediately evident.

- Women tended to do better than men on TOEFL total (means of 513 and 502, respectively); this was for 21 of the 25 leading contingents. Women make up a minority of all candidates and this result may be due to selective factors.

- For 18 of the 25 leading contingents, candidates tested in foreign centers did better on TOEFL total than those tested domestically. Such a pattern cannot be rationalized easily. Selective factors may be involved--e.g., in the seven contingents with higher scores for domestic- than for foreign-tested examinees, the proportion of domestic-tested examinees was lower than average.

- Repeaters tended to have lower TOEFL total scores, at time of most recent testing, than degree planners generally (mean of 496 as compared to 505 for all degree planners, including repeaters); this was true for 15 of the 25 leading countries. Contingents with higher repeater than all-candidate means were characterized by lower than average performance on TOEFL total and a higher incidence of repeated testing.

- Prospective postsecondary enrollees who did not name receiving institutions (nonreporting candidates) earned substantially lower TOEFL total scores than their reporting counterparts; this was true for all 25 leading contingents. The mean TOEFL total score for nonreporting candidates (486) was more than 0.5 standard deviation units below the means for candidates who designated U.S. higher education institutions (43 percent did so).

- Sixty percent of all prospective graduate students did not designate a specific intended field (department) of study; among 25 leading country contingents, percentages not naming specific fields ranged from 33 to 78.

Among the 40 percent who named specific fields, 38 percent named a physical science field, 20 percent named "business school," and 20 percent named social sciences; 12 percent intended

to study in bioscience fields, 8 percent in humanities, and less than 1 percent in law.

Mean TOEFL total scores for graduate planners who named specific fields were substantially higher than for those who did not do so; this was true for all 25 leading contingents.

- Most of the leading native country contingents were quite homogeneous linguistically in the sense that most degree planners in the specific contingents reported a common native language. In 16 of 25 contingents, from 96 to 99 percent of the examinees reported a common native language, and in five additional contingents from 73 to 87 percent reported a common language. Four of the leading contingents were linguistically fractionated--Malaysia, Nigeria, Ghana, and India. Differences among country contingents in mean TOEFL scores were only weakly associated with differences in degree of linguistic homogeneity.

Variability in TOEFL Scores Across Countries: Some Correlates

Among 129 country contingents, the following trends were identified by correlational procedures:

- Incidence of institutional score reporting was positively associated with TOEFL total ($r = .52$ between percent reporting to U.S. institution only and TOEFL total).
- Nonreporting (percent) was inversely related to TOEFL total ($r = -.55$).
- Incidence of repeated testing (percent repeaters) was inversely associated with TOEFL total ($r = -.64$).
- Country contingents with higher percentages of women tended to have higher TOEFL total ($r = .40$).
- Contingents with higher percentages of foreign-center examinees tended to have higher TOEFL total ($r = .26$).
- Contingents from "developed" countries tended to have lower percentages of examinees taking TOEFL to facilitate plans for

postsecondary education than did contingents from "developing" countries.*

- Compared to contingents from developing countries, contingents from developed countries tended to have higher representation of women, tended to be younger on the average, and tended to have higher TOEFL scores, especially on Listening Comprehension.

Some Conclusions

In the analyses reported herein, all of the TOEFL examinees involved were classifiable as self-reported prospective enrollees in U.S. or Canadian colleges or universities. Based on the evidence reviewed several conclusions are warranted.

- Many TOEFL examinees (perhaps a majority) during any given testing year should not be thought of as prospective applicants for admission in the following academic year.

- Examinees who designate colleges and universities to receive their most recent TOEFL scores are closer than their nondesignating counterparts to the application-for-admission stage of the flow of candidates from first-time TOEFL testing through application and ultimate enrollment (if accepted) in a U.S. or Canadian postsecondary institution.

- Nonreporting candidates are interested primarily in assessing their level of English proficiency before proceeding with a formal application for admission; such application is likely to be contingent upon reaching some personally or externally imposed criterion or threshold score level on TOEFL.

- TOEFL norms based on examinees who designate institutional score recipients (who have substantially higher scores than their nonreporting counterparts) are likely to provide a more realistic frame of reference for TOEFL users associated with admissions or ESL instruction at both undergraduate and graduate levels than

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*"Developing" vs "developed" status is defined in terms of the relative standing of countries on indicators such as school enrollment and literacy rates, indices of scientific capacity, etc., which were correlated with TOEFL score means (see Section 7). Countries with higher standing on these indicators (circa 1965-70) are thought of as more highly developed countries, whereas those with lower standing during this period are thought of as "developing countries."

norms that include scores of nonreporting examinees and that include all score records for repeater candidates, not just the most recent scores.

These conclusions are consistent with findings reported elsewhere (Wilson, 1982a) regarding the degree of overlap between the population of candidates taking TOEFL and the foreign candidate populations taking the Graduate Record Examinations (GRE) Aptitude Test or the Graduate Management Admission Test (GMAT) during the 1977-79 study period.

Further research is needed to answer questions regarding (a) the basic patterning and timing of the candidate flow process from initial TOEFL candidacy to formal application and enrollment in a U.S. or Canadian higher education institution, (b) the extent of plans realization among TOEFL candidates who aspire to study in the United States or Canada, and (c) and the degree of overlap between the population of degree-planning TOEFL candidates and the population of foreign students enrolled in U.S. or Canadian higher education institutions.

SECTION 1. THE POSTSECONDARY-DEGREE-PLANNING TOEFL CANDIDATE POPULATION

From September 1977 through August 1979, approximately 283,000 individuals took the Test of English as a Foreign Language (TOEFL) one or more times in an International or Special Center test administration, and designated a "native country" code, selected from a list of more than 170 codes provided in the TOEFL Handbook for Applicants (see Exhibit 1A).* Of these test takers, 235,738 designated as reasons for taking TOEFL, "to enter a college or university as an undergraduate student," or "to enter...as a graduate student," and planned to study for their degree in the United States or Canada. The population of prospective postsecondary degree seekers (N = 235,738), thus defined, represented some 83 percent of all examinees during the period who designated native countries; the remaining 17 percent gave other reasons for taking TOEFL, failed to indicate a reason, or did not indicate plans to seek a degree in the United States or Canada.**

The distribution of this population of postsecondary degree-planning TOEFL candidates according to native country is shown in Table 1.1. Table 1.1 lists a total of 163 countries designated by two or more degree-planning TOEFL candidates, within each of six regions as defined by the TOEFL office; the number of degree planners for each region and country of origin is shown, as is the percentage for each region.

- Of the 235,738 degree planners, 50 percent reported Asian and almost 23 percent Middle Eastern countries of origin; African, American, and European countries accounted, respectively, for approximately 10, 9, and 7 percent of the total, with the

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*As shown in Exhibit 1A, TOEFL candidates are instructed to "look for the name of your country or region [in the list provided]," and to enter the corresponding native country code on TOEFL forms; "native country" is not defined in the instructions. It is recognized that classification by native country does not take into account the consequences of migration. It is not assumed that all candidates designating a given "native country" remained resident in that country, were educated in that country, were citizens of that country at time of testing, etc.

**Other reasons for taking TOEFL (listed on the answer sheet) are: "to enter a school other than a college or university," "to become licensed to practice my profession in the U.S.A. or Canada," "to demonstrate my proficiency in English to the company for which I work or expect to work," or "other than above."

Exhibit 1A

Alphabetical Listing of Native Countries and Codes, and Instructions to TOEFL Candidates: From the TOEFL Handbook for Applicants, 1979-80

8. **Native Country Code**: Look for the name of your country or region in List C below. Then, under "Native Country Code" on your registration confirmation ticket, copy the number that is printed next to your country or region. If your country has recently changed its name, look for it under its former name. If your country is not listed at all, write 000 in the boxes in area 8.

LIST C: Region and Native Country Codes

301 Afghanistan
601 Albania
101 Algeria
501 American Samoa
602 Andorra
102 Angola
801 Argentina
504 Australia
603 Austria
605 Azores
701 Bahamas
304 Bahrain
307 Bangladesh
704 Barbados
607 Belgium
706 Belize
125 Benin
710 Bermuda
310 Bhutan
804 Bolivia
104 Botswana
807 Brazil
313 Brunei
610 Bulgaria
316 Burma
107 Burundi
110 Cameroon
791 Canada
114 Cape Verde Islands
907 Caroline Islands
716 Cayman Islands
116 Central African Republic
119 Chad
810 Chile
813 Colombia
121 Comoros
122 Congo
719 Costa Rica
722 Cuba
813 Cyprus
616 Czechoslovakia
619 Denmark
126 Djibouti
725 Dominican Republic
816 Ecuador
128 Egypt
728 El Salvador
131 Equatorial Guinea
134 Ethiopia
631 Federal Republic of Germany
510 Fiji
625 Finland
628 France
818 French Guiana
534 French Polynesia
137 Gabon
140 Gambia
632 German Democratic Rep
143 Ghana
822 Great Britain
634 Greece
637 Greenland
729 Grenada
730 Guadaloupe
513 Guam
731 Guatemala
146 Guinea
147 Guinea-Bissau
819 Guyana
734 Haiti
737 Honduras
322 Hong Kong
640 Hungary
643 Iceland
325 India
328 Indonesia
331 Iran
334 Iraq
646 Ireland
337 Israel
649 Italy
149 Ivory Coast
740 Jamaica
340 Japan
343 Jordan
346 Kampuchea
152 Kenya
514 Kiribati
349 Korea
352 Kuwait
355 Laos
358 Lebanon
155 Lesotho
158 Liberia
161 Libya
651 Liechtenstein
652 Luxembourg
360 Macao
164 Madagascar
653 Madeira
167 Malawi
361 Malaysia
364 Maldives
170 Mali
655 Malta
516 Mariana Islands
742 Martinique
519 Marshall Islands
173 Mauritania
365 Mauritius
743 Mexico
657 Monaco
367 Mongolia
176 Morocco
179 Mozambique
522 Nauru
370 Nepal
658 Netherlands
746 Netherlands Antilles
523 New Caledonia
528 New Zealand
749 Nicaragua
182 Niger
185 Nigeria
661 Norway
373 Oman
376 Pakistan
752 Panama
525 Papua New Guinea
822 Paraguay
457 People's Republic of China
825 Peru
379 Philippines
664 Poland
667 Portugal
753 Puerto Rico
382 Qatar
671 Romania
191 Rwanda
676 San Marino
192 Sao Tome and Principe
385 Saudi Arabia
194 Senegal
195 Seychelles
197 Sierra Leone
391 Singapore
532 Solomon Islands
201 Somalia
204 South Africa (Republic of)
680 Spain
394 Sri Lanka
207 Sudan
754 Surinam
210 Swaziland
683 Sweden
686 Switzerland
396 Syria
319 Taiwan
213 Tanzania
401 Thailand
216 Togo
535 Tonga
758 Trinidad and Tobago
219 Tunisia
404 Turkey
222 Uganda
688 Union of Soviet Socialist Rep.
405 United Arab Emirates
760 United States of America
225 Upper Volta
828 Uruguay
689 Vatican
831 Venezuela
407 Vietnam
761 Virgin Islands
537 Western Samoa
764 West Indies Associated States
410 Yemen
692 Yugoslavia
228 Zaire
231 Zambia
188 Zimbabwe

TABLE 1.1

NUMBER OF DEGREE PLANNING TOEFL CANDIDATES, BY NATIVE COUNTRY AND TOEFL REGION: INTERNATIONAL AND SPECIAL TESTING PROGRAMS, 1977-78 and 1978-79[1]

AFRICA-TOTAL	(24862)
ALGERIA	(437)
ANGOLA	(19)
BENIN	(13)
BOTSWANA	(30)
BURUNDI	(6)
C. AFRICA	(8)
CAMEROON	(336)
CHAD	(10)
CONGO	(6)
CAPE VERDE	(15)
EGYPT	(1676)
EQ. GUINEA	(4)
ETHIOPIA	(474)
GABON	(5)
GAMBIA	(66)
GHANA	(2193)
GUINEA	(8)
GUINEA-B.	(2)
IVORY COAST	(195)
KENYA	(868)
LESOTHO	(43)
LIBERIA	(868)
LIBYA	(1411)
MADAGASCAR	(27)
MALAWI	(48)
MALI	(42)
MAURITANIA	(9)
MOROCCO	(191)
MOZAMBIQUE	(11)
NIGER	(29)
NIGERIA	(13857)
RHODESIA	(436)
RWANDA	(8)
S. AFRICA	(168)
SENEGAL	(69)
SIERRA L.	(196)
SOMALIA	(165)
SUDAN	(678)
SWAZILAND	(23)
TANZANIA	(361)
TOGO	(16)
TUNISIA	(61)
UGANDA	(147)
UP. VOLTA	(23)
ZAIRE	(142)
ZAMBIA	(183)

(10.4 %)

AMERICA-TOTAL	(21948)
ARGENTINA	(586)
BAHAMAS	(67)
BARBADOS	(51)
BELIZE	(9)
BOLIVIA	(413)
BRAZIL	(2481)
CANADA	(644)
CHILE	(831)
COLOMBIA	(1838)
COSTA RICA	(492)
CUBA	(169)
DOMINICA	(226)
ECUADOR	(558)
EL SALVADOR	(578)
FR. GUIANA	(67)
GUADALOUPE	(61)
GUATEMALA	(298)
GUYANA	(48)
HAITI	(318)
HONDURAS	(399)
JAMAICA	(251)
MARTINIQUE	(18)
MEXICO	(3464)
NETH. ANT.	(298)
NICARAGUA	(594)
PANAMA	(725)
PARAGUAY	(52)
PERU	(1078)
PUERTO RICO	(777)
SURINAM	(79)
TRINIDAD	(86)
URUGUAY	(148)
USA	(281)
VENEZUELA	(3934)
WEST INDIES	(91)

(8.9 %)

EUROPE-TOTAL	(16989)
ALBANIA	(4)
AUSTRIA	(188)
AZORES	(23)
BELGIUM	(514)
BULGARIA	(57)
CYPRUS	(928)
CZECHOSL.	(52)
DENMARK	(194)
FINLAND	(288)
FRANCE	(2194)
GERMANY	(1672)
GR. BRITAIN	(96)
GREECE	(3288)
HUNGARY	(59)
ICELAND	(196)
IRELAND	(51)
ITALY	(1946)
LUXEMBOURG	(23)
MALTA	(8)
MONACO	(4)
NETHERLANDS	(844)
NORWAY	(802)
POLAND	(243)
PORTUGAL	(253)
ROMANIA	(124)
SPAIN	(510)
SWEDEN	(540)
SWITZERLAND	(523)
TURKEY	(1937)
USSR	(224)
YUGOSLAVIA	(222)

(7.2 %)

ASIA-TOTAL	(117486)
AFGHANISTAN	(169)
BANGLADESH	(1005)
BHUTAN	(16)
BRUNEI	(65)
BURMA	(194)
CHINA *	(307311)
HONG KONG	(21395)
INDIA	(13704)
INDONESIA	(3508)
JAPAN	(12338)
KHMER R.	(66)
KOREA	(7675)
LAOS	(68)
MACAO	(485)
MALAYSIA	(7154)
MALDIVES	(2)
MAURITIUS	(48)
MONGOLIA	(2)
NEPAL	(186)
PAKISTAN	(3833)
PHILIPPINES	(2662)
SINGAPORE	(1036)
SRI LANKA	(649)
THAILAND	(8176)
VIETNAM	(1719)

(50.0 %)

MIDEAST-TOTAL	(53407)
ARAB EMIR.	(135)
BAHRAIN	(224)
IRAN	(34421)
IRAQ	(1009)
ISRAEL	(2352)
JORDAN	(5103)
KUWAIT	(1128)
LEBANON	(4323)
OMAN	(68)
QATAR	(138)
SAUDI AR.	(3631)
SYRIA	(645)
YEMEN	(258)

(22.7 %)

PACIFIC-TOTAL	(2316)
AM. SAMOA	(663)
AUSTRALIA	(661)
CAROLINE I.	(910)
FIJI ISL.	(86)
GUAM	(71)
MARIANA	(160)
MARSHALL	(169)
NEW ZEAL	(41)
NEW GUINEA	(31)
OKINAWA	(27)
TAHITI	(43)
TONGA	(98)
WEST [illegible]	(115)

(1.0 %)

ALL REGIONS	(235736)

[1] Countries designated by two or more TOEFL candidates during 1977-78 and 1978-79 who specified plans to seek an undergraduate or a graduate degree in the USA or Canada as reasons for taking TOEFL.

* Taiwan

remaining 1 percent from countries or territories in the Pacific region.*

- Twenty-five of the 163 listed countries were represented by fewer than 10 degree-planning candidates; 34 were represented by 1,000 or more.

- Prospective postsecondary students from six countries--Iran, China (Taiwan), Hong Kong, India, Nigeria, and Japan--accounted for more than half of the total population of degree-planning TOEFL candidates (126,146 or 53.5 percent).

For the 25 leading countries of origin in terms of number of degree planners, Table 1.2 shows the total number of test takers, the number of degree planners, and the percentage of all test takers who were degree planners, by level of planned degree program. Also shown is the rank of each country among all countries of origin of foreign students in U.S. colleges based on 1978-79 enrollment estimates (Boyan, 1980). The leading 25 countries accounted for 82.8 percent of all test takers (234,181 of 282,899) and 84.5 percent of all degree planners (199,188 of 235,738); they are listed in descending order with respect to number of degree planners.

- As indicated earlier, about 83 percent of all test takers were degree planners; Table 1.2 shows that 42 percent planned undergraduate and 41 percent planned graduate study in the United States or Canada.

  However, for several native country contingents, lower percentages of test takers took TOEFL in connection with plans for postsecondary study--only 27 percent from the Philippines, for example, and 66 percent from Greece, 68 percent from Japan, and 75 percent from France. For many candidates from these particular countries, TOEFL appears to have been taken for reasons associated with career-related business or professional pursuits (e.g., to demonstrate proficiency in English for professional licensure or to an employer or prospective employer) rather than to facilitate plans for postsecondary study in the United States or Canada.

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*It is estimated (Boyan, 1980) that foreign students with countries of origin (defined not as native countries but as countries of citizenship by Boyan) in the TOEFL Asian region accounted for only approximately 29 percent of the total enrollment of foreign students in the United States during 1978-79; comparable enrollment figures, in percentages, for other TOEFL regions were Middle East (27), Africa (13), American (22, including a substantial Canadian contingent), Europe (8), and Pacific (1 plus).

TABLE 1.2

TWENTY-FIVE LEADING COUNTRIES OF ORIGIN OF DEGREE-PLANNING TOEFL CANDIDATES: DATA ON NUMBER OF TEST TAKERS, NUMBER OF DEGREE PLANNERS, DEGREE PLANNERS AS A PERCENTAGE OF TEST TAKERS, AND RANKING AS COUNTRIES OF ORIGIN OF FOREIGN STUDENTS IN U.S. COLLEGES DURING 1978-79*

Country	Ranking as country of origin of enrolled foreign students in U.S. colleges**	Data on TOEFL candidates, 1977-79				
		Number of test-takers	Test-takers who plan degree program in U.S.A. or Canada			
			All planners		U.G.	Grad.
		N_{tt}	(N)	($\%_{tt}$)	($\%_{tt}$)	($\%_{tt}$)
Iran	(1)	38,363	34,421	(90)	58	32
Taiwan	(3)	32,558	30,731	(94)	17	78
Hong Kong	(5)	25,631	21,395	(83)	62	21
India	(7)	16,823	13,704	(81)	12	70
Nigeria	(2)	14,173	13,557	(96)	85	10
Japan	(6)	18,089	12,338	(68)	34	34
Thailand	(11)	9,013	8,176	(91)	17	74
Korea	(13)	8,625	7,475	(87)	27	59
Malaysia	(16)	7,567	7,154	(95)	72	23
Jordan	(20)	5,792	5,183	(89)	61	29
Lebanon	(14)	4,703	4,323	(92)	70	22
Venezuela	(8)	4,372	3,934	(90)	54	36
Pakistan	(25)	4,307	3,833	(89)	43	46
Saudi Arabia	(9)	4,005	3,631	(91)	51	40
Indonesia	(29)	4,197	3,508	(84)	42	42
Mexico	(10)	3,952	3,464	(88)	24	64
Greece	(21)	4,825	3,200	(66)	35	31
Philippines	(24)	9,974	2,662	(27)	11	16
Brazil	(18)	3,098	2,481	(80)	19	61
Israel	(23)	2,648	2,352	(89)	39	50
France	(26)	2,939	2,194	(75)	18	56
Ghana	(32)	2,267	2,193	(97)	81	15
Turkey	(30)	2,190	1,937	(88)	37	52
Singapore	(56)	1,991	1,836	(92)	71	21
Colombia	(19)	2,079	1,830	(88)	48	40
All Countries: Total[†]		282,899	235,738	(83)	42	41

*Countries are listed in descending order by number of degree planners; countries with 2,000 or more test takers that are not in the top 25 with respect to number of degree planners are Egypt, Germany, and Vietnam.

**Ranking among all foreign countries as country of origin of enrolled students in U.S. colleges during 1978-79, based on enrollment data provided in Boyan (1980).

[†]For the 25 leading countries only, test takers (N = 234,181) and degree planners (N = 199,188), account for 82.8 and 84.5 percent of the respective all countries totals.

- There is marked variability among native country contingents with respect to the percentages of test takers planning undergraduate versus graduate study.*

  Undergraduate planners were predominant for Nigeria, Ghana, Malaysia, Singapore, Hong Kong, Iran, Jordan, and Lebanon, for example; graduate planners were predominant for Taiwan, India, Thailand, Korea, Mexico, Brazil, France, and Turkey.

Of the 25 leading countries of origin of degree-planning TOEFL candidates, all but two (Ghana, ranked 32, and Singapore, 56) were among the leading countries of origin of enrolled foreign graduate students in the United States during 1978-79, according to their ranking based on extrapolated enrollment estimates provided by Boyan (1980, Table 2.8). According to Boyan (1980, Table 3.5) the 1978-79 foreign student enrollment was approximately 56 percent undergraduate and 44 percent graduate; as shown in Table 1.2, the distribution of TOEFL degree planners with respect to level of intended degree program was essentially evenly balanced.

*Countries with 2,000 or more examinees that were not among the leading 25 with respect to number of degree planners were Egypt, Germany, and Vietnam. Germany and Egypt had 46 and 73 percent, respectively; for Vietnam the percentage was 85.

SECTION 2. DEMOGRAPHIC AND TESTING-RELATED CHARACTERISTICS OF POSTSECONDARY-DEGREE-PLANNING TOEFL CANDIDATES: SUMMARY DATA BY NATIVE COUNTRY AND REGION

Table 2.1 provides summary data on selected demographic and testing-related variables for degree-planning TOEFL candidates from each of the 25 leading countries of origin (classified by TOEFL region), for all such candidates in each TOEFL region (without regard to country), and for all candidates without regard to region or "continent," respectively. Except for "number of test takers," the summary statistics in Table 2.1 are for all degree planners, without regard to level.*

In addition to data on the distribution of degree-planning candidates by level, as reported in the preceding section, Table 2.1 provides information on the following variables:

- Percentage of candidates who reported that they had taken TOEFL previously (i.e., "repeaters")
- Mean age at time of most recent testing (excluding data on undergraduate planners outside the 15-45 age range and graduate planners outside the 20-50 range)**
- Percentage of males among postsecondary planners
- Center locale (percentage tested outside the United States or Canada--i.e., in a "foreign" test center, though not necessarily one located in the native country of the candidate)
- Score-reporting pattern (percentages designating and not designating institutions or agencies to receive score reports)
- Homogeneity/heterogeneity of native country groups with respect to reported native languages as reflected by two indices:

  Percentage of all candidates accounted for by the most frequently reported native language

  Index of Linguistic Fractionalization (ILF), an estimate of the probability that two candidates from a given native

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*Detailed data for degree planners, by level of the planned degree program, on the variables in Table 2.1 and other summary tables in this report are provided elsewhere for each of 138 native country groups with 10 or more degree planners during 1977-79 (Wilson, 1982).

**A detailed discussion of the factors involved in this curtailment is provided later in this section.

TABLE 2.1

CHARACTERISTICS OF DEGREE PLANNING TOEFL CANDIDATES BY TOEFL REGION, AND BY TWENTY-FIVE LEADING COUNTRIES OF ORIGIN OF SUCH CANDIDATES CLASSIFIED BY REGION: INTERNATIONAL AND SPECIAL TESTING PROGRAMS ONLY

1977-78 & 1978-79

REGION AND COUNTRY	TEST TAKERS	DEGREE SEEKERS					REPEATERS	AGE**		SEX	CENTER LOCALE	SCORE REPORT***				LANGUAGES	
		U.G.		GRAD		TOTAL		U.G. (SEAS)	GRAD (SEAS)			FOR.	U.S.	BOTH	NO	MAINS	LFSS INDEX
	N	N	%	N	%	N	%			% MALE	% FOR.	%	%	%	%		
AFRICA-TOTAL	26495	18416	70	6136	23	24552	93	15	22.7	28.0	86	83	3	51	6	40	53	0.61
GHANA	2767	1847	81	346	15	2193	97	4	22.6	27.6	91	96	5	59	10	25	45	0.72
NIGERIA	14173	12072	85	1485	10	13557	96	10	22.7	28.0	87	92	2	52	6	40	48	0.71
AMERICA-TOTAL	24474	10199	41	10869	44	21068	85	24	20.8	27.3	66	59	4	52	4	39	98	0.06
BRAZIL	3098	599	19	1882	61	2481	80	26	21.7	28.7	65	82	3	53	6	39	97	0.06
COLOMBIA	2079	1008	48	822	40	1830	88	23	20.2	27.1	66	60	3	57	3	37	98	0.04
MEXICO	3952	951	24	2513	64	3464	88	23	21.1	25.9	79	66	4	55	5	35	99	0.03
VENEZUELA	4372	2366	54	1568	36	3934	90	41	22.0	28.4	65	36	4	41	2	54	98	0.04
ASIA-TOTAL	144162	47606	33	69880	48	117486	81	36	21.4	26.1	66	80	9	35	6	50	76	0.41
CHINA (TAIWAN)	32558	5619	17	25512	78	30731	94	63	23.6	25.9	59	94	12	27	9	52	99	0.02
HONG KONG	25631	15999	62	5636	21	21395	83	46	20.3	25.3	60	70	11	18	4	67	99	0.01
INDIA	16823	1970	12	11734	70	13704	81	13	21.9	26.9	86	88	5	64	6	25	21	0.88
INDONESIA	4197	1760	42	1748	42	3508	84	41	20.5	27.6	74	77	8	28	5	58	87	0.24
JAPAN	18089	6105	34	6233	34	12338	68	57	22.6	27.1	65	70	5	38	4	53	97	0.06
KOREA	8625	2364	27	5111	59	7475	87	39	22.2	27.8	69	71	3	48	3	46	97	0.06
MALAYSIA	7567	5444	72	1710	23	7154	95	19	20.5	27.4	71	75	16	32	3	50	52	0.58
PAKISTAN	4307	1869	43	1964	46	3833	89	17	21.4	26.6	92	90	6	44	7	43	81	0.33
PHILIPPINES	9974	1087	11	1575	16	2662	27	5	21.7	26.7	67	71	6	67	4	23	79	0.43
SINGAPORE	1991	1408	71	428	21	1836	92	16	21.1	26.0	63	92	17	28	6	49	73	0.43
THAILAND	9013	1541	17	6635	74	8176	91	38	21.5	25.6	53	83	6	32	3	59	98	0.04
EUROPE-TOTAL	25039	7448	30	9481	38	16929	68	15	20.5	25.2	70	80	7	50	5	38	95	0.14
FRANCE	2939	541	18	1653	56	2194	75	10	20.7	24.1	66	85	4	62	6	26	96	0.07
GREECE	4829	1691	35	1509	31	3200	66	28	19.8	24.2	75	79	13	31	4	52	98	0.03
TURKEY	2198	803	37	1134	52	1937	88	26	19.6	24.4	79	77	4	48	6	42	96	0.07
MIDEAST-TOTAL	59529	34230	58	19177	32	53407	90	40	21.3	26.6	82	44	4	29	2	64	93	0.16
IRAN	38363	22275	58	12146	32	34421	90	44	21.5	26.4	78	34	3	27	2	68	96	0.07
ISRAEL	2648	1031	39	1321	50	2352	89	14	23.6	28.1	75	81	3	57	4	37	87	0.24
JORDAN	5792	3524	61	1659	29	5183	89	30	19.9	27.0	91	71	2	25	2	70	94	0.12
LEBANON	4703	3306	70	1017	22	4323	92	26	20.6	23.9	92	61	17	31	8	44	95	0.10
SAUDI ARABIA	4005	2046	51	1585	40	3631	91	55	22.6	27.4	94	36	2	26	2	70	97	0.06
PACIFIC-TOTAL	7803	1693	60	623	22	2316	83	13	20.3	23.5	60	89	18	31	14	37	87	0.15
ALL CONTINENTS	282899	119592	42	116146	41	235738	83	32	21.4	24.3	72	71	7	38	5	50	84	0.21

*EXCLUDES CANDIDATES TAKING TOEFL FOR OTHER REASONS UNLESS OTHERWISE NOTED; ALSO EXCLUDES CANDIDATES IN INSTITUTIONAL PROGRAMS.
**AGE RESTRICTED TO 15-45 FOR UNDERGRADUATES, 20-50 FOR GRADUATES.
***FOR. = EMBASSY, AGENCY, FOUNDATION, FOREIGN HIGHER INSTITUTION; U.S. = U.S. COLLEGE OR UNIVERSITY.
#MOST FREQUENTLY REPORTED NATIVE LANGUAGE AS A PERCENTAGE OF ALL LANGUAGES REPORTED.
##AN ESTIMATE OF THE PROBABILITY THAT TWO CANDIDATES PICKED AT RANDOM WOULD NOT SPEAK THE SAME LANGUAGE.
(50 AND 80 ARE MEDIAN VALUES, AT REGIONAL-SUMMARY LEVEL, OF COUNTRY DATA FOR COUNTRIES WITH N OF 10 OR MORE.)

country group will not report the same language (after Taylor & Hudson, 1972)*

Data for the 235,738 degree-planning TOEFL candidates without regard to country (see the "all continents" data) on the variables just described indicate the following:

- Many of the candidates were repeaters (about 32 percent).
- A majority were males (72 percent), and a majority tested in a "foreign" center (71 percent).
- Based on distributions curtailed as indicated, the mean age of undergraduate planners was 21.4 years and that of graduate planners was 26.3 years at time of most recent testing.
- Judging from two indices of homogeneity/heterogeneity of country groups with respect to reported native language, for 50 percent of all native country contingents (those with 10 or more candidates) one language group accounted for 84 percent or more of the candidates; one-half of the contingents had ILF values of 0.21 or less.

It is evident, however, that there were substantial differences among TOEFL regions and the leading 25 countries of origin of degree-planning candidates with respect to the variables under consideration.

Previous Experience with TOEFL

Some 32 percent of the degree-planning candidates during 1977-79 reported that they had taken TOEFL one or more times previously, but there was marked variation in this test-taking pattern by region and by country within region among the leading 25 native country groups.

- The repeated testing or repeater pattern was most prevalent among Mideastern (40 percent) and Asian (36 percent) candidates and least prevalent among candidates from the Pacific (13 percent) and from Africa and Europe (15 percent each); some 24 percent of candidates from the TOEFL American region were repeaters (see Table 1.1 for listing of countries by TOEFL regions).

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*At the regional and all continents levels, the values reported are medians of country data for countries with N of 10 or more.

$ILF = 1 - \sum_{i=1}^{n} (P_i)^2$, where P = the proportion of candidates in the i^{th} language group and n is the number of language groups.

- o There are, however, marked differences by country. For example, more than one-half of all Saudi Arabian and Japanese candidates, and over 40 percent of those from Iran, Hong Kong, Taiwan, Indonesia, and Venezuela were repeaters; but, among candidates from Ghana, Nigeria, France, Israel, and India, only 10 percent or fewer were repeaters.

In analyses not reported in Table 2.1, when average TOEFL total scores by native country were correlated with the percentage of repeater candidates, by country, across 129 native country groups, a moderately strong inverse relationship was found ($r = -.64$)--i.e., across native country groups the incidence of repeaters tended to increase as mean TOEFL scores decreased. This finding is consistent with the reasonable expectation that first-time candidates, without regard to country, whose English proficiency, as reflected in TOEFL scores, falls below some personally or externally imposed criterion level will continue to take TOEFL periodically until that criterion level has been attained.

Sex Distribution

The population of degree-planning TOEFL candidates was predominantly male (72 percent), but there are clear differences by region and among the 25 leading countries.

- o Some 86 percent of all African candidates and 82 percent of those from the Mideast were male, as compared to only 66 percent of Asian and American, 70 percent of European, and 60 percent of Pacific candidates.

- o Over 90 percent of candidates from Saudi Arabia, Lebanon, Jordan, Pakistan and Ghana were male, as were over 85 percent of those from India and Nigeria.

- o Over half (53 percent) of the candidates from the Philippines were women, as were almost half (47 percent) of those from Thailand.

It is assumed that differences among countries in the sex distribution of candidates reflects primarily differences in national custom and tradition affecting the role of women, their access to higher education, and their choices of particular fields of study.

Age at Time of Most Recent Testing

Age at time of most recent testing was calculated from the birth dates supplied by candidates. As noted in the table, undergraduate means reflect exclusion of data for candidates below a calculated age of 15 or

above the age of 45; graduate means reflect exclusion of candidates less than 20 or more than 50 years old.*

Means of the curtailed age distributions for all undergraduate and graduate planners, without regard to country, were 21.4 and 26.3, respectively; medians for these distributions (not shown in the table) were 20.6 and 25.4, respectively.

- Among undergraduate planners, those from countries in the TOEFL European, American, and Pacific regions were youngest on the average (with means between 20.3 and 20.8), while those from the African region were considerably older than average (with a mean of 22.7); candidates from Asian and Mideastern countries had means of 21.4 and 21.3 years, respectively.

- Among graduate planners, those from Pacific and European countries were younger on the average (23.5 and 25.2, respectively) than all graduate planners; those from Africa and America were slightly older than average (28.0 and 27.3, respectively), while Asian and Mideastern graduate-planning candidates (26.1 and 26.6) were typical.

- It is interesting to note that the discrepancy in mean age between undergraduate and graduate planners varies considerably among the major countries of origin of degree-planning TOEFL candidates--from 3.3 years for Lebanon through 12.1 years for Indonesia.

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*Among TOEFL candidates, approximately 0.8 percent of undergraduate-degree planners were over 45 and only 0.1 percent were less than 15; of graduate planners, 7.0 percent were less than 20 and 0.8 percent were older than 50. Medians for uncurtailed age distributions were 20.6 and 25.1 for undergraduate and graduate planners as compared to medians of 20.6 and 25.4 for undergraduate and graduate planners in the curtailed distributions. The means reported in Table 2.1 for graduate planners are thus likely to overestimate somewhat the average age for all TOEFL takers with plans for graduate study while the means reported for undergraduate planners may be thought of as very nearly identical to those for all TOEFL takers with plans for undergraduate study.

While measures of central tendency that exclude data for self-reported graduate planners below the age of 20 may slightly overestimate the average age of all TOEFL candidates who report plans for graduate study in the United States or Canada, they probably provide somewhat more realistic estimates for that subpopulation of graduate-planning TOEFL candidates who are likely to be applying for admission to graduate school within a reasonable period of time than averages that include candidates under the age of 20. Only a very slight percentage of candidates taking graduate-level admissions tests in the United States are so young--for example, only 0.2 percent of GRE candidates during 1979 were less than 20 (Wild, 1980).

In evaluating these age data it is important to keep in mind (a) that although all the candidates under consideration indicated in response to questions included on TOEFL forms that they planned to enter institutions in the United States or Canada as undergraduate or graduate students intending to study for degrees, they did not provide information regarding the timing of their plans, and (b) that little or nothing is known regarding the characteristic pattern and timing of candidate flow or progression from initial TOEFL testing to application and enrollment as undergraduate or graduate students in the U.S.A. or Canada. Indeed, it is not known what proportion of the candidate population under consideration ultimately realized or will realize the plans reported. Moreover, due primarily to difficulties involved in framing questions about "educational level" that might be applicable worldwide, TOEFL candidates are not asked to indicate their current educational level in their respective educational systems, their enrollment status (e.g., enrolled vs. not enrolled in a school, college, or university), or expected or actual year of completion of educational programs at various levels.

The age data for degree-planning TOEFL candidates do indicate, among other things, that undergraduate-degree planners as a group were substantially older than entering college freshmen in the United States.*

- In fall 1980, based on data provided by Astin et al. (1981), the mean age of entering college freshmen was approximately 18.5 years, and over 83 percent were 19 or younger; the mean age of undergraduate planners in the TOEFL candidate population was 21.4, and only 14 percent of these candidates were 19 or younger at time of most recent testing.

Data on the age distribution of "entering first-time graduate students" comparable to that provided by Astin for "entering college freshmen" are not available.

- If the age of all candidates taking GRE tests, including foreign candidates, is used as a basis for comparison, TOEFL graduate planners are also somewhat older than "prospective applicants for admission to graduate programs, without regard to level, in the United States." The mean age of GRE candidates during 1978-79, for example, was 25.9 years as compared to 26.3 years for TOEFL graduate-planners above 19 years of age (the age range that includes essentially all GRE candidates); 55 percent of GRE candidates but only 44 percent of TOEFL graduate planners were 24 or younger, including candidates less than 20 years old, who accounted for 7 percent of TOEFL but only 0.2 percent of GRE candidates (Wild, 1980).

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*Some undergraduate-degree planning TOEFL candidates may ultimately seek admission at a level equivalent to that of first-time enrolled freshmen in U.S. colleges or universities, while others may seek admission with advanced standing.

Locale of Testing Center

More than seven in ten degree-planning candidates were tested outside the United States or Canada, i.e., in a "foreign" test center, though not necessarily in their native countries. However, there was marked variability by native country and region in this regard.

- Of candidates from four TOEFL regions (Pacific, Africa, Asia, and Europe), 80 percent or more were tested in a foreign center; only 44 percent of all Mideastern candidates and 59 percent of those from the TOEFL American region were tested outside the United States or Canada.

- Among the 25 leading countries of origin, at one extreme, only 34 percent of candidates from Iran and 36 percent of those from Saudi Arabia and Venezuela were tested in foreign centers; at the other, foreign test centers accounted for over 90 percent of candidates from Pakistan, Singapore, Taiwan, Nigeria, and Ghana.

Pattern of Score Reporting

As previously noted, all of the TOEFL candidates included in these analyses indicated that they planned to enter colleges or universities in the United States or Canada. However, only 43 percent requested that the results of their most recent testing be reported to U.S. higher education institutions--38 percent designated only a U.S. institution and 5 percent designated both a U.S. institution and either a non-higher education institution (e.g., embassy, or agency concerned with international foreign students) or a postsecondary institution outside the United States. Fully 50 percent of degree-planning TOEFL candidates failed to designate any institution or agency to receive their test results, which, therefore, were transmitted to the examinees only. Again, there are marked differences by country and region.

- For 11 of the 25 leading countries of origin, the percentage of candidates failing to designate any institution was greater than the percentage designating colleges or universities to receive their test results.

- Countries with relatively high percentages of candidates who designated higher education institutions were India (70 percent), the Philippines (71 percent), Ghana (69 percent) and France (68 percent). Less than 30 percent of candidates from Saudi Arabia, Jordan, Iran, and Hong Kong did so.

As previously noted, nothing is known regarding the timing of TOEFL candidates' plans for undergraduate or graduate study in the U.S.A. or Canada, the characteristic flow or progression of candidates from time of initial testing to time of formal application for admission and enrollment

(if accepted), or the proportion of candidates ultimately realizing their plans. However, it is reasonable to hypothesize that TOEFL candidates who designate specific higher institutions to receive their TOEFL scores are nearer the "application stage" of the candidate-flow process than their counterparts who fail to do so, electing instead to be the sole recipients of score reports.*

To the extent that this hypothesis is consistent with reality, the percentage of candidates designating specific colleges and universities to receive their TOEFL results provides one basis for estimating the proportion of TOEFL candidates during a given testing period who might be in or near the application stage of the candidate-flow process. On the other hand, prospective degree seekers who do not designate receiving institutions are likely to be interested primarily in assessing their level of English proficiency before proceeding with a formal application for admission--an act that presumably would be contingent in part upon the level of TOEFL scores at the time of most recent testing.

Following this line of reasoning, it is relevant to note (Table 2.1) that TOEFL regions and leading countries characterized by a high percentage of candidates who failed to designate receiving institutions are also characterized by a high percentage of repeating candidates. Among Mideastern and Asian candidates, for example, repeater percentages are 40 and 36 and nonreporting percentages are 64 and 50, respectively; European, and American candidates, repeater percentages of 15, 24 and 15 correspond to nonreporting percentages of 40, 39, and 38.

Analyses not reported in Table 2.1 indicate a substantial positive correlation ($r = .72$) across 129 native country contingents between these two summary statistics--i.e., percent repeaters vs. percent failing to designate institutional score report recipients.

Homogeneity/Heterogeneity with Respect to Native Language

For each native country group, two indices of homogeneity/heterogeneity with respect to reported native language were calculated, namely,

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*Some examinees not designating colleges or universities to receive reports of TOEFL results may submit copies of their score reports directly to institutions in conjunction with an application for admission. Institutions receiving reports directly from candidates are urged to verify the reported scores by calling ETS. Little or nothing is known regarding the extent of this practice. Indirect evidence (the volume of telephone calls from institutions requesting verification of candidate-submitted score reports) suggests that the great majority of candidates failing to designate institutions to receive their score reports probably do not transmit those reports directly to institutions.

the percentage of candidates accounted for by the most frequently reported language ("main" language column in the table) and an Index of Linguistic Fractionalization ("LF Index" column). As previously indicated, the ILF is an estimate of the probability that two candidates randomly selected from the same country will not report the same language. The two indices are extremely closely and inversely related. It is readily apparent, for example, that among the leading 25 native countries, those with the highest ILF indices (e.g., India, 0.88, Ghana, 0.72, and Nigeria, 0.71) are lowest with respect to the percentage of candidates accounted for by the most frequently reported language (21, 48, and 45 percent, respectively).

At the "all continents" and "regional" levels, the values reported are median values of country data for all countries with 10 or more candidates, not just the 25 leading countries of origin for which specific indices are shown.

- The leading country groups are, in fact, somewhat more homogeneous linguistically, on the average, than all countries. For all countries with N of 10 or greater, median main language and ILF values are 84 percent and 0.21, respectively; for the 25 leading countries only, comparable values are 96 percent and 0.08 (not shown in the table).

- Candidate groups from countries in the TOEFL American, European, and Mideastern regions, typically, were most homogeneous linguistically, while those in the African and Asian regions, typically, were more heterogeneous.

These data indicate that for a majority of leading native country groups (and a substantial number of other country groups as well), a single language group is descriptive of the language background of the great majority of candidates. It is important to recognize, of course, that a candidate's "native language" is not necessarily the candidate's "best" language for some or all purposes (e.g., speaking, reading, writing; academic vs. social). Detailed consideration is given to the principal language groups associated with each native country group in Section 6.

Table 2.2 provides data, comparable to that in Table 2.1 for the 25 leading countries (which accounted for 84.5 percent of all degree planning TOEFL candidates), for 105 native country groups that accounted, collectively, for 99.2 percent of all degree planners during 1977-79.

TABLE 2.2

CHARACTERISTICS OF TOEFL CANDIDATES BY REGION AND COUNTRY: UNDERGRADUATE AND GRADUATE DEGREE SEEKERS ONLY (INTERNATIONAL AND SPECIAL PROGRAMS ONLY)

1977-78 & 1978-79

REGION AND COUNTRY	TEST TAKERS(TT)	DEGREE SEEKERS(XTT)*						PEPEATERS	AGE**		SEX	CENTER LOCALE	SCORE REPORT***				LANGUAGES	
		U.S.		GRAD		TOTAL			U.S.	GRAD			FOR.	U.S.	BOTH	NO	MAINS	LF&B
	N	N	XTT	N	XTT	N	XTT	%	(MEAN)	(MEAN)	% MALE	% FOR.	%	%	%	%	%	INDEX
AFRICA-TOTAL	24496	18416	70	6136	23	24552	93	18	22.7	28.0	84	83	3	81	6	40	53	0.61
ALGERIA	523	120	23	317	61	437	84	65	24.2	27.0	91	24	2	38	2	59	87	0.60
CAMEROON	348	239	69	97	28	336	97	11	23.7	27.4	79	84	3	65	5	26	71	0.47
EGYPT	2288	409	18	1267	55	1676	73	24	21.4	28.3	83	76	7	38	8	47	91	0.17
ETHIOPIA	523	364	70	110	21	474	91	14	22.3	28.5	67	66	5	48	5	42	68	0.47
GHANA	2267	1047	81	346	15	2193	97	4	22.4	27.4	91	94	5	59	10	25	45	0.72
IVORY COAST	205	66	32	129	63	195	95	33	23.8	26.1	84	39	3	67	4	26	52	0.64
KENYA	933	733	79	1[illegible]	17	888	95	6	22.2	27.0	75	86	6	62	6	26	38	0.68
LIBERIA	278	163	5[illegible]	97	35	260	94	8	24.8	27.8	77	90	1	60	4	35	49	0.62
LIBYA	1554	767	49	644	41	1411	91	65	23.3	28.4	96	24	1	18	1	80	95	0.10
MOROCCO	218	62	28	129	59	191	88	17	21.8	25.7	83	80	4	59	2	35	58	0.63
NIGERIA	14173	12072	85	1485	10	13557	96	10	22.7	28.0	87	92	2	52	6	40	46	0.71
RHODESIA	458	359	79	77	17	436	96	5	22.7	26.8	74	92	4	65	8	22	80	0.35
SOUTH AFRICA	208	73	36	95	47	168	84	2	23.1	28.8	76	89	3	73	5	19	30	0.82
SIERRA LEONE	207	149	72	47	23	196	95	13	24.2	28.4	73	72	6	64	6	25	40	0.69
SOMALIA	173	119	69	46	27	165	95	10	24.1	28.8	85	80	4	30	6	60	96	0.07
SUDAN	612	102	17	468	76	570	93	15	23.3	29.3	94	93	4	51	8	48	94	0.11
TANZANIA	337	183	54	118	35	301	89	7	24.3	28.9	80	86	10	57	6	27	76	0.40
UGANDA	164	102	62	45	27	147	90	8	22.7	28.1	66	80	10	58	8	24	33	0.78
ZAIRE	163	75	46	67	41	142	87	20	23.6	26.8	85	75	1	60	4	35	32	0.82
ZAMBIA	189	102	54	81	43	183	97	5	24.4	27.6	83	88	6	62	7	25	50	0.62
OTHER	688	310	45	316	46	626	91	14	23.6	27.6	78	76	4	55	6	35		
AMERICA-TOTAL	24874	18199	41	18849	44	21048	85	24	28.6	27.3	66	89	4	52	4	39	98	0.06
ARGENTINA	788	191	24	395	50	586	74	12	22.7	28.6	66	73	5	58	4	32	98	0.05
BOLIVIA	486	316	65	97	20	413	85	26	20.8	28.5	72	85	3	58	3	39	97	0.06
BRAZIL	3098	599	19	1882	61	2481	80	26	21.7	28.7	65	82	3	53	6	39	97	0.06
CANADA	536	193	36	251	47	444	83	8	20.9	25.6	65	11	27	39	9	25	75	0.43
CHILE	1043	270	26	561	54	831	80	25	22.4	28.6	73	75	7	50	2	41	99	0.03
COLOMBIA	2079	1006	48	822	40	1830	88	23	20.2	27.1	66	60	3	57	3	37	96	0.04
COSTA RICA	555	228	41	264	48	492	89	17	20.1	26.2	73	88	5	45	6	44	99	0.03
CUBA	306	86	28	83	27	169	55	13	20.1	27.5	59	42	1	66	2	30	98	0.03
DOMINICA	312	111	36	115	37	226	72	21	19.8	25.8	63	57	0	53	0	32	100	0.0
ECUADOR	617	337	55	213	35	550	89	21	20.2	28.4	69	59	2	54	4	36	99	0.02
EL SALVADOR	657	420	64	150	23	570	87	25	20.1	26.8	60	56	2	54	2	40	100	0.01
GUATEMALA	406	161	40	129	32	290	71	17	19.9	26.4	68	67	3	44	3	50	99	0.01
HAITI	527	185	35	125	24	310	59	15	21.6	27.8	62	55	4	65	5	25	97	0.05
HONDURAS	437	293	67	106	24	399	91	25	19.7	28.4	55	55	4	54	9	33	99	0.03
MEXICO	3952	951	24	2513	64	3464	88	23	21.1	25.9	79	66	4	55	5	35	99	0.03
NETH. ANTILLES	223	166	74	42	19	208	93	8	19.1	25.4	52	82	3	62	4	31	79	0.35
NICARAGUA	665	434	65	160	24	594	89	25	19.4	26.0	60	36	5	48	3	43	98	0.04
PANAMA	833	466	56	259	31	725	87	23	19.6	26.5	59	72	3	50	6	40	98	0.05
PARAGUAY	71	30	42	22	31	52	73	21	22.6	26.4	65	56	10	48	0	42	90	0.10
PERU	1307	613	47	459	35	1072	82	21	20.4	28.0	66	75	6	49	7	38	98	0.03
PUERTO RICO	856	345	40	432	50	777	91	5	18.9	24.8	49	42	1	80	4	15	98	0.04
URUGUAY	164	48	29	92	56	140	85	9	22.3	28.8	64	81	4	67	7	22	95	0.10
USA	341	216	63	65	19	281	82	12	18.7	25.3	55	73	3	62	5	30	34	0.82
VENEZUELA	4372	2366	54	1568	36	3934	90	41	22.0	28.4	65	36	4	41	2	54	98	0.04
OTHER	243	166	68	44	18	210	86	7	21.7	27.8	56	65	3	57	2	37		

TABLE 2.2, CONTINUED

REGION AND COUNTRY	TEST TAKERS(TT)	DEGREE SEEKERS(XTT)*						REPEATERS	AGE**		SEX	CENTER LOCALE	SCORE REPORT***				LANGUAGES	
		U. G.		GRAD		TOTAL			U.G.	GRAD			FOR.	U.S.	BOTH	NO	MAINS	LFSS
	N	N	XTT	N	XTT	N	XTT	X	(MEAN)	(MEAN)	X MALE	X FOR.	X	X	X	X	X	INDEX
ASIA-TOTAL	144162	47606	33	69880	48	117486	81	36	21.4	26.1	66	80	9	38	6	80	76	0.41
AFGHANISTAN	280	69	34	100	50	169	84	41	23.8	27.6	79	50	10	35	15	40	44	0.69
BANGLADESH	1106	438	40	567	51	1005	91	18	20.3	26.7	89	91	3	42	5	50	91	0.17
BURMA	235	123	52	71	30	194	83	19	21.5	26.9	65	65	7	44	4	45	86	0.25
CHINA (TAIWAN)	32558	5419	17	25312	78	30731	94	43	23.8	25.9	59	94	12	27	9	52	99	0.02
HONG KONG	25631	15959	62	5436	21	21395	83	46	20.3	23.3	60	70	11	18	4	67	99	0.03
INDIA	16823	1970	12	11734	70	13704	81	13	21.9	24.9	86	88	5	64	6	25	21	0.88
INDONESIA	4197	1760	42	1748	42	3508	84	41	20.5	32.6	74	77	8	28	5	58	87	0.24
JAPAN	18089	6105	34	6233	34	12338	68	52	22.6	27.1	65	70	5	36	4	53	97	0.06
KOREA	8625	2364	27	5111	59	7475	87	39	22.2	27.8	69	71	3	48	3	46	97	0.06
MACAO	567	319	56	166	29	485	86	36	20.3	23.4	52	83	34	15	9	42	84	0.28
MALAYSIA	7567	5444	72	1710	23	7154	95	19	20.5	27.4	71	75	14	32	3	50	52	0.58
NEPAL	208	30	14	156	75	186	89	19	22.5	30.2	83	94	3	39	4	54		
PAKISTAN	4307	1869	43	1964	46	3833	89	17	21.4	26.6	92	98	6	44	7	43		
PHILIPPINES	9974	1087	11	1575	16	2662	27	5	21.7	26.7	47	71	6	67	4	23	78	0.43
SINGAPORE	1991	1408	71	428	21	1836	92	16	21.1	26.8	63	92	17	28	6	49	73	0.43
SRI LANKA	758	218	29	431	57	649	87	9	21.3	27.7	77	94	8	44	14	33	64	0.48
THAILAND	9013	1541	17	6635	74	8176	91	38	21.5	25.6	53	83	6	32	3	59	98	0.04
VIETNAM	2918	1313	45	406	20	1719	88	30	22.7	28.6	62	15	4	68	1	30	47	0.57
OTHER	306	178	54	97	32	267	87	24	21.5	26.1	69	45	10	50	4	35		
EUROPE-TOTAL	25039	7448	30	9481	38	16929	68	15	20.5	25.2	70	80	7	50	5	38	95	0.14
AUSTRIA	224	50	22	100	45	150	67	7	21.2	25.4	69	85	3	70	4	23	91	0.16
BELGIUM	628	113	18	401	64	514	82	4	21.0	24.1	74	90	4	53	9	34	55	0.63
CYPRUS	1097	646	59	274	25	920	84	18	19.7	24.9	82	91	7	25	9	58	91	0.17
DENMARK	363	76	21	118	33	194	53	4	21.1	26.1	64	91	2	56	4	39	96	0.07
FINLAND	433	156	36	132	30	288	67	4	21.4	28.0	49	85	5	61	3	31	87	0.23
FRANCE	2939	541	18	1653	56	2194	75	10	20.7	24.1	66	85	4	62	6	28	96	0.07
GERMANY	3634	733	20	939	26	1672	46	6	21.1	25.7	59	82	11	50	4	34	97	0.06
GREAT BRITAIN	152	67	44	29	19	96	63	13	19.9	26.3	64	82	8	43	7	42	37	0.79
GREECE	4625	1691	35	1509	31	3200	66	28	19.6	24.2	75	79	13	31	4	52	98	0.03
ITALY	1519	465	31	581	38	1046	69	12	20.2	26.2	69	74	5	61	3	32	97	0.06
NETHERLANDS	1183	430	36	416	35	846	72	4	20.4	24.8	71	84	7	58	5	30	96	0.07
NORWAY	1034	404	39	398	38	802	78	5	21.6	25.4	78	96	3	61	3	33	95	0.10
POLAND	464	94	20	149	32	243	52	16	23.7	27.5	54	51	11	54	4	31	94	0.12
PORTUGAL	332	131	39	122	37	253	76	12	20.9	26.6	66	58	12	39	13	36	91	0.17
ROMANIA	238	47	20	77	32	124	52	11	22.4	30.8	57	46	11	57	3	28	90	0.20
SPAIN	718	133	19	377	53	510	71	14	21.9	26.2	74	73	5	45	7	43	87	0.23
SWEDEN	857	289	34	251	29	540	63	6	20.3	26.1	58	89	3	60	3	35	95	0.09
SWITZERLAND	855	207	24	316	37	523	61	9	22.0	26.5	68	80	3	61	3	32	66	0.49
TURKEY	2190	803	37	1134	52	1937	88	26	19.6	24.6	79	77	4	48	6	42	96	0.07
USSR	374	149	40	75	20	224	60	16	19.5	29.0	55	28	4	72	0	24	94	0.11
YUGOSLAVIA	360	45	13	177	49	222	62	18	23.4	28.6	68	71	8	68	1	23		
OTHER	620	178	29	253	41	431	70	11	22.4	27.3	68	68	9	55	5	31		

TABLE 2.2, CONCLUDED

REGION AND COUNTRY	TEST TAKERS(TT)	DEGREE SEEKERS(XTT)*						REPEATERS	AGE**		SEX	CENTER LOCALE	SCORE REPORT***				LANGUAGES	
		U.G.		GRAD		TOTAL			U.G.	GRAD			FOR.	U.S.	BOTH	NO	MAIN@	LFU@
	N	N	%TT	N	%TT	N	%TT	%	(MEAN)	(MEAN)	% MALE	% FOR.	%	%	%	%	%	INDEX
MIDEAST-TOTAL	59829	34238	58	19177	32	53407	90	40	21.3	26.6	82	44	4	29	2	64	93	0.16
ARAB EMIRATES	155	107	69	28	18	135	87	56	21.4	26.0	92	36	0	27	1	72	93	0.13
BAHRAIN	262	157	60	67	26	224	85	34	19.5	25.0	77	68	3	33	3	61	92	0.15
IRAN	38363	22275	58	12144	32	34421	90	44	21.8	26.4	78	34	3	27	2	68		
IRAQ	1168	368	32	641	55	1009	86	22	21.7	28.2	85	67	3	38	4	55	89	0.28
ISRAEL	2648	1031	39	1321	50	2352	89	14	23.6	28.1	78	81	3	57	4	37	87	0.24
JORDAN	5792	3524	61	1659	29	5183	89	38	19.9	27.0	91	71	2	25	2	70	94	0.12
KUWAIT	1232	751	61	377	31	1128	92	39	20.8	26.5	88	49	3	23	2	72	95	0.10
LEBANON	4703	3306	70	1017	22	4323	92	26	20.6	23.9	92	61	17	31	8	44	95	0.10
OMAN	67	54	81	6	9	60	90	58	21.9	25.4	92	43	0	33	0	67	92	0.16
QATAR	145	125	86	13	9	138	95	46	21.2	25.3	99	20	2	27	1	70	93	0.14
SAUDI ARABIA	4005	2046	51	1585	40	3631	91	55	22.6	27.4	94	36	2	24	2	70	97	0.06
SYRIA	816	403	49	242	30	645	79	32	20.7	26.6	87	61	13	34	4	49	93	0.13
YEMEN	173	83	48	75	43	158	91	38	21.6	27.5	93	78	7	26	3	65	93	0.13
OTHER	0	0	0	0	0	0	0	0	0.0	0.0	0	0	0	0	0	0		
PACIFIC-TOTAL	2800	1693	60	623	22	2316	83	13	20.3	23.5	60	89	18	31	14	37	87	0.15
AMERICAN SAMOA	887	416	47	247	28	663	75	14	18.7	23.7	51	94	47	4	21	28	98	0.19
AUSTRALIA	127	47	37	19	15	66	52	44	23.2	27.2	79	52	6	21	2	71	70	0.50
CAROLINE ISLANDS	1009	724	72	186	18	910	90	10	20.6	22.2	61	89	6	42	8	44	32	0.79
FIJI ISLANDS	97	68	70	18	19	86	89	5	21.4	25.9	73	90	15	49	7	29	38	0.72
MARIANA ISLANDS	174	141	81	19	11	160	92	10	20.2	22.0	59	91	1	59	2	38	93	0.14
MARSHALL ISLANDS	189	117	62	52	28	169	89	12	21.1	21.8	75	95	9	42	2	46	96	0.07
TAHITI	50	31	62	10	20	41	82	15	20.1	22.8	46	27	2	80	0	17	81	0.33
TONGA	111	69	62	21	19	90	81	11	20.3	25.2	51	93	13	16	61	10	98	0.04
WEST SAMOA	131	71	54	44	34	115	88	10	22.2	22.8	60	94	13	29	30	29	99	0.02
OTHER	25	9	36	7	28	16	64	19	20.6	25.8	69	81	0	44	25	31		
ALL CONTINENTS	282899	119592	42	116146	41	235738	83	32	21.4	26.3	72	71	7	38	5	50	84	0.21

*EXCLUDES CANDIDATES TAKING TOEFL FOR OTHER REASONS UNLESS OTHERWISE NOTED; ALSO EXCLUDES CANDIDATES IN INSTITUTIONAL PROGRAMS.
**AGE RESTRICTED TO 15-45 FOR UNDERGRADUATES, 20-50 FOR GRADUATES.
***FOR. = EMBASSY, AGENCY, FOUNDATION, FOREIGN HIGHER INSTITUTION; U.S. = U.S. COLLEGE OR UNIVERSITY.
@MOST FREQUENTLY REPORTED NATIVE LANGUAGE AS A PERCENTAGE OF ALL LANGUAGES REPORTED.
@@AN ESTIMATE OF THE PROBABILITY THAT TWO CANDIDATES PICKED AT RANDOM WOULD NOT SPEAK THE SAME LANGUAGE.

(# & ## are median values, at regional-summary level, of country data for countries with N of 10 or more.)

SECTION 3. PERFORMANCE OF POSTSECONDARY-DEGREE PLANNERS ON TOEFL BY LEVEL OF PLANNED DEGREE PROGRAM AND COUNTRY OF ORIGIN

As seen in preceding sections, of 282,898 individuals who took TOEFL one or more times during the period from September 1977 through August 1979, some 235,738 (or about 83 percent) indicated that they did so because they planned to enter institutions in the United States or Canada to work toward a graduate or an undergraduate degree. Within the population of degree-planning TOEFL candidates, a total of 119,592 (or 50.7 percent) were undergraduate- and 116,146 (or 49.3 percent) were graduate-degree planners. This section presents data regarding the performance of these degree-planning candidates on TOEFL.

In evaluating TOEFL score data it is important to keep in mind the following characteristics of TOEFL (as described in the TOEFL Test and Score Manual, 1981):

- The Test of English as a Foreign Language is designed to measure the English proficiency for individuals whose native language is not English. Each form of the current test consists of three separately timed sections, with questions in multiple-choice format, and takes approximately two hours to complete:

  Section 1, Listening Comprehension (hereafter, also Listening or Listen), measures the ability to understand English as it is spoken in the United States.

  Section 2, Structure and Written Expression (Writing or Write), measures mastery of important structural and grammatical points in standard written English.

  Section 3, Reading Comprehension (Reading or Read), measures the ability of candidates to understand the meaning and the uses of words as well as the ability to understand a variety of reading materials.

- Three section scores and a total score are reported. Scores for the respective part scores (Listen, Write, Read) are reported on a 20-80 scale; the total score is reported on a 200-800 scale. Observed scores, however, ordinarily do not cover the full scale range. During the two-year period from September 1978 through August 1980, for example, observed minimum and maximum scores for Listen, Write, Read, and Total were, respectively, 20-70, 20-68, 20-67, and 240-677 (TOEFL Manual, 1981).

It is also important to note, in evaluating the TOEFL score statistics reported here, that for individuals with multiple TOEFL records (i.e., repeaters) only the most recent test result was used.

- For this reason, the means and standard deviations of TOEFL scores for undergraduate- and graduate-degree planners (and other

subgroups) reported herein are not directly comparable to those reported in the TOEFL Manual (1981).

- o In compiling normative data for reference groups, as reported in the TOEFL Manual (1981), all score data for repeater candidates were included, not just the most recent results. Under the assumption that the most recent results for repeaters are likely to be higher than earlier results, on the average, then the means reported here and in the Native Country File (Wilson, 1982) should be expected to be somewhat higher than those reported in the Manual. That such is the case is indicated by comparison of the data for degree-level subgroups in Table 3.1 with data for these subgroups in the Manual.

Table 3.1 reports means and standard deviations of TOEFL scores for all degree planners (degree seekers), and for undergraduate and graduate planners, by TOEFL region and for 25 leading countries of origin (which collectively account for some 84 percent of all degree planners). In considering results for undergraduate and graduate planners, it is useful to keep in mind (see Section 2) that the typical undergraduate planner was over 20 years old (median age 20.6) and that the typical graduate planner was 25 (median age 25.1). As might be expected, undergraduate planners had somewhat lower TOEFL total scores than graduate planners (499 as compared to 511), a difference amounting to about .16 total-sample standard deviation units.

However, it may be determined from Table 3.1 that undergraduate planners in seven of the 25 native country contingents had higher TOEFL total means than their graduate-planning counterparts. This is inconsistent not only with the pattern for all candidates, without regard to country, but also with logical expectation.

- o Although it cannot be assumed that the TOEFL degree-planning populations are representative of indigenous student populations at comparable levels in their respective countries, it is nonetheless anomalous to find prospective graduate students earning lower scores than prospective undergraduate students on a test of "verbal skills" in contingents from Brazil, Colombia, Mexico, Hong Kong, Indonesia, Singapore, and Iran.

Examination of the section-score means is instructive. In six of these seven contingents, graduate-degree planners had scores on Reading Comprehension that were equal to or higher than those for undergraduates--differences in mean TOEFL total scores for these subgroups thus were accounted for primarily by differences in Listening Comprehension (and, to a lesser extent, Written Expression) rather than in Reading Comprehension.

- o In all of these contingents, undergraduate planners had higher Listening means than graduate planners (by about three scaled-score points, on the average); on Written Expression, the mean for undergraduate planners was in three instances equal to and in four

TABLE 3.1

MEAN TOEFL SCORE PROFILES FOR DEGREE PLANNING CANDIDATES BY LEVEL OF PLANNED DEGREE PROGRAM BY TOEFL REGION, AND BY TWENTY-FIVE LEADING COUNTRIES OF ORIGIN OF SUCH CANDIDATES: INTERNATIONAL AND SPECIAL TESTING PROGRAMS

1977-78 & 1978-79

REGION AND COUNTRY	ALL DEGREE SEEKERS					UNDERGRADUATES					GRADUATES				
	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD
		READ M	READ SD	TOTAL M	TOTAL SD		READ M	READ SD	TOTAL M	TOTAL SD		READ M	READ SD	TOTAL M	TOTAL SD
AFRICA-TOTAL	(24952)	49.7	12.8	12.7	511.66	(18416)	49.7	12.7	12.7	509.61	(6136)	51.8	12.9	12.9	517.78
GHANA	(2193)	54.7	10.6	57.6	561.53	(1847)	54.7	57.6	57.6	557.53	(346)	56.6	60.6	60.5	585.49
NIGERIA	(13597)	48.7	13.6	13.6	511.53	(12072)	47.6	12.6	12.6	505.50	(1485)	12.7	17.7	17.6	553.59
AMERICA-TOTAL	(21048)	14.8	19.9	13.7	517.72	(10199)	15.8	19.9	12.8	516.74	(10849)	13.8	18.8	14.7	517.71
BRAZIL	(2481)	13.8	19.9	13.7	516.72	(999)	15.8	19.9	12.8	518.76	(1482)	12.8	19.8	16.7	515.70
COLOMBIA	(1830)	14.8	19.9	12.7	515.72	(1008)	15.8	19.9	12.8	519.74	(822)	12.8	18.8	13.7	511.69
MEXICO	(3464)	14.8	19.8	14.7	522.68	(951)	16.8	10.9	12.8	525.73	(2513)	14.8	17.8	16.6	521.66
VENEZUELA	(3934)	12.8	16.8	10.7	490.68	(2366)	12.8	16.8	19.7	488.69	(1568)	11.8	16.8	11.7	493.67
ASIA-TOTAL	(117486)	12.7	11.8	12.8	516.67	(76606)	13.8	10.8	11.8	513.69	(40880)	11.7	11.8	13.7	518.66
CHINA(TAIWAN)	(30731)	11.6	10.6	12.6	509.53	(14119)	11.7	17.7	19.7	490.58	(25312)	11.6	11.6	12.6	516.51
HONG KONG	(21395)	12.7	10.7	12.7	515.60	(15959)	13.7	11.7	12.7	519.57	(5436)	11.7	19.7	11.8	509.66
INDIA	(13704)	14.8	15.8	17.7	553.71	(1970)	14.9	13.9	14.8	538.79	(11734)	13.8	16.8	18.7	556.69
INDONESIA	(3508)	10.7	17.7	18.7	484.64	(1760)	12.7	17.8	18.7	491.66	(1748)	18.7	16.7	18.7	477.62
JAPAN	(12318)	10.7	18.8	19.8	498.68	(6105)	19.7	16.8	16.8	472.67	(6213)	10.7	10.8	11.8	504.66
KOREA	(7475)	10.7	10.8	11.7	507.61	(2364)	12.8	18.8	19.8	494.71	(5111)	19.6	11.7	14.6	513.55
MALAYSIA	(7154)	17.6	16.7	16.7	559.58	(5444)	18.6	14.7	16.6	558.57	(1710)	17.6	19.8	17.7	559.64
PAKISTAN	(3833)	13.8	11.9	13.8	521.72	(1849)	14.8	10.9	12.8	518.82	(1964)	12.8	11.8	14.8	524.71
PHILIPPINES	(2662)	12.6	17.7	19.7	580.61	(1087)	18.7	14.8	16.7	560.65	(1575)	10.6	19.7	10.6	594.56
SINGAPORE	(1836)	13.7	15.8	17.7	566.68	(1408)	18.6	15.8	17.7	568.66	(428)	17.7	15.9	18.8	567.73
THAILAND	(8174)	17.7	16.7	17.7	571.62	(1541)	10.8	15.8	15.8	466.70	(6633)	19.7	16.7	17.7	572.60
EUROPE-TOTAL	(16929)	17.7	13.8	14.8	566.70	(7448)	17.7	12.8	12.8	538.72	(9481)	17.7	14.8	16.7	553.67
FRANCE	(2194)	16.6	15.6	18.5	565.52	(961)	16.7	13.7	16.6	550.61	(1653)	16.6	16.6	19.5	570.68
GREECE	(3200)	14.7	10.8	10.8	510.72	(1691)	14.8	10.8	19.8	508.73	(1509)	13.7	10.8	11.8	514.71
TURKEY	(1937)	13.7	19.8	10.8	505.71	(803)	13.7	18.8	18.8	498.68	(1134)	13.7	19.8	11.8	510.72
MIDEAST-TOTAL	(53607)	10.8	15.8	16.8	566.71	(36230)	11.8	15.8	16.8	566.70	(19177)	19.8	13.8	13.8	565.73
IRAN	(34621)	10.9	13.8	16.8	561.68	(22275)	11.8	13.8	16.8	563.67	(12346)	18.8	13.8	16.8	556.67
ISRAEL	(2357)	16.8	11.8	10.9	528.76	(1031)	15.8	10.8	18.9	508.76	(1321)	17.7	13.8	12.9	543.70
JORDAN	(5183)	10.7	16.8	16.8	559.69	(3524)	10.7	16.8	13.7	556.68	(1659)	19.7	15.8	15.8	566.71
LEBANON	(4121)	12.7	18.6	17.8	591.72	(3306)	12.7	18.8	17.8	588.68	(1017)	11.8	19.9	19.9	501.82
SAUDI ARABIA	(3611)	18.7	12.8	11.7	536.66	(2046)	18.8	11.8	10.7	530.65	(1565)	10.7	12.8	12.7	543.66
PACIFIC-TOTAL	(2316)	10.7	13.9	13.8	551.72	(1693)	10.7	14.9	13.8	556.74	(623)	19.7	12.8	12.7	543.68
ALL CONTINENTS	(235738)	12.8	10.8	10.9	505.73	(119592)	12.8	11.8	11.9	499.73	(116146)	12.8	10.8	12.8	511.72

instances higher than that for graduate planners. However, graduate planners equalled or exceeded undergraduate planners in Reading Comprehension in six of the seven contingents.

Items in the TOEFL Reading Comprehension section (vocabulary and reading passages), of course, are more like those included in standard tests of "academic ability" than are those in the Listening and Written Expression sections, and the graduate planners tended to do as well as or better than undergraduate planners on the "academic ability" component in six of the seven contingents; undergraduate planners were consistently higher only on Listening in the seven contingents under consideration.

Generally speaking, across the 25 leading native country groups, the pattern of undergraduate-graduate differences was similar:

- The mean Listening score for undergraduate planners was higher than that for graduate planners in 19 of the 25 leading country groups; the mean for Structure and Written Expression was higher for undergraduate planners in eight of the 25. However, with respect to Reading Comprehension, in only three of the 25 country groups was the mean for undergraduate planners equal to or higher than that for graduate planners, and in only one instance did undergraduate planners actually have the higher mean on this measure, which tends to parallel the "verbal" component in such widely used measures of academic ability as the Graduate Record Examinations Aptitude Test and the College Board Scholastic Aptitude Test.

It is apparent that the major source of observed differences in TOEFL total between graduate and undergraduate planners tends to be performance on the Reading Comprehension and, to a lesser extent, the Written Expression items. The data for all candidates (the "all continents" row) show that Listening means were identical for these two groups; that the means differed by one point (undergraduates 0.12 standard deviation units lower) on Written Expression; and that the means on Reading Comprehension differed by three points (undergraduates 0.33 standard deviation units lower). Looking at these differences in another way, it may be inferred that undergraduate planners tended to have higher Listening Comprehension scores relative to their scores on Reading Comprehension. Why this should be so is not immediately evident. Variables such as amount and recency of formal ESL training may be involved, along with many others.

- Examination of data for degree-planning candidates by TOEFL region suggests that Listening means were somewhat lower, relative to means on other sections, for candidates from the African and Asian regions and somewhat higher in the same sense for candidates from the other regions.

Generally speaking, candidates from the TOEFL Mideastern and Pacific regions had the lowest mean TOEFL total scores; candidates from the European region had the highest.

- However, among the 25 leading countries, of the five countries with highest TOEFL total means for degree planners generally, all but France (565) were from the Asian region: the Philippines (580), Singapore (568), Malaysia (559), and India (553). The means for these countries were from .58 to .96 standard deviation units above the grand mean for all candidates. At the other extreme, the five candidate groups with the lowest TOEFL total means (Saudi Arabia, Jordan, Iran, Thailand, and Indonesia) included three Asian and two Mideastern candidate groups, with means ranging from .38 to 1.04 standard deviation units below the grand mean for all candidates.

In assessing and evaluating differences among candidates by reported native country, it is important to keep in mind that the presence of differences in performance on TOEFL among candidates from different native countries does not permit the generalization that there are fundamental differences in ability of the various national and language groups to learn English or in the level of English proficiency generally attained by them (TOEFL Manual, 1981).

For example, these native country contingents almost certainly differ, on the average, in amount and quality of formal preparation in English as a second language, amount of nonacademic exposure to spoken and written English, exposure to academic instruction in the English language, and so forth. Differences in opportunity to learn English as a second language, for instance, may help to explain the fact that--considering candidates from the 25 leading countries only--those from the Philippines, Singapore, Malaysia, and India had the highest TOEFL scores. Higher scores for candidates from the European region generally may be a function of both greater ESL exposure and significant overlap in linguistic heritage.

Setting aside questions regarding their origins, the observed differences in TOEFL scores for the 25 leading country contingents (as well as those shown in Table 3.2 for contingents from 105 countries, accounting for 99 percent of all degree-planning candidates) do provide a basis for inferring meaningful differences associated with native country in level of developed English language proficiency among TOEFL candidates aspiring to undergraduate and graduate study in the United States and Canada.

TABLE 3.2

TOEFL PART AND TOTAL SCORES BY REGION AND COUNTRY:
UNDERGRADUATE AND GRADUATE DEGREE SEEKERS ONLY
INTERNATIONAL AND SPECIAL PROGRAMS ONLY

1977-78 & 1978-79

REGION AND COUNTRY	ALL DEGREE SEEKERS					UNDERGRADUATES					GRADUATES				
	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD
AFRICA-TOTAL	(24552)	49.7	52.8	52.7	511.66	(18416)	49.7	52.7	52.7	509.61	(6136)	51.8	52.9	52.9	517.78
ALGERIA	(437)	51.7	50.7	50.8	502.65	(120)	52.7	48.7	48.7	495.69	(317)	51.7	50.7	50.8	505.66
CAMEROON	(336)	51.7	54.7	53.6	529.60	(239)	51.7	54.7	53.6	528.55	(97)	51.8	54.9	54.7	533.71
EGYPT	(1676)	49.8	47.9	47.8	478.78	(409)	51.9	46.9	45.9	475.83	(1267)	49.8	47.8	48.8	479.76
ETHIOPIA	(474)	53.7	51.8	50.8	515.72	(364)	53.7	50.9	50.8	508.73	(110)	53.7	54.8	54.8	536.69
GHANA	(2193)	54.7	58.6	57.6	561.53	(1847)	54.7	57.6	57.6	557.53	(346)	56.6	60.6	60.5	585.49
IVORY COAST	(195)	48.7	48.8	49.6	485.60	(66)	48.7	48.7	48.7	476.62	(129)	48.7	49.8	50.6	490.59
KENYA	(888)	53.8	56.7	55.7	546.61	(733)	52.8	56.7	54.6	542.62	(155)	55.7	58.6	58.6	570.53
LIBERIA	(268)	53.7	52.8	51.7	523.65	(163)	52.7	51.7	49.7	504.61	(97)	55.7	54.7	55.7	552.60
LIBYA	(1411)	48.6	41.7	41.7	431.58	(767)	47.6	40.7	39.6	416.55	(644)	49.6	43.7	43.7	448.57
MOROCCO	(191)	54.7	53.8	54.8	533.69	(62)	53.8	50.9	51.8	514.77	(129)	54.7	54.7	55.7	542.63
NIGERIA	(13557)	48.7	53.6	53.6	511.53	(12072)	47.6	52.6	52.6	505.50	(1485)	52.7	57.7	57.6	553.59
RHODESIA	(436)	54.6	58.6	56.6	553.50	(359)	54.6	57.6	55.5	553.50	(77)	57.6	60.5	59.6	586.44
SOUTH AFRICA	(168)	59.7	59.7	60.7	594.63	(73)	57.8	57.9	56.8	565.73	(95)	61.6	62.6	62.6	616.62
SIERRA LEONE	(196)	53.7	54.7	53.7	530.63	(149)	52.7	53.7	52.6	522.60	(47)	55.6	57.7	56.8	556.66
SOMALIA	(165)	49.7	47.9	49.8	484.70	(119)	49.7	47.8	48.7	481.66	(46)	49.7	48.10	51.8	492.80
SUDAN	(578)	46.7	48.7	49.7	475.56	(102)	47.9	45.9	44.9	452.77	(468)	45.6	49.7	50.6	479.52
TANZANIA	(301)	53.7	55.7	55.7	542.62	(183)	53.8	53.7	53.7	530.66	(118)	53.6	57.6	58.6	561.48
UGANDA	(147)	54.7	58.6	56.6	560.53	(102)	54.7	57.7	55.6	553.56	(45)	55.6	60.6	60.6	575.43
ZAIRE	(142)	45.9	46.9	47.8	461.76	(75)	44.9	44.8	45.7	443.68	(67)	47.8	48.9	49.9	481.80
ZAMBIA	(183)	55.7	56.8	55.7	557.64	(102)	55.8	55.8	54.7	544.69	(81)	56.6	58.7	58.6	573.53
OTHER	(626)	50.8	51.9	51.8	506.79	(310)	50.9	50.8	50.8	500.72	(316)	50.9	51.10	52.9	512.84
AMERICA-TOTAL	(21048)	54.8	49.9	53.7	517.72	(10199)	55.8	49.9	52.8	516.74	(10849)	53.8	49.8	54.7	517.71
ARGENTINA	(586)	54.7	53.8	57.6	552.65	(191)	57.8	53.9	56.7	553.69	(395)	55.7	53.8	58.6	552.63
BOLIVIA	(413)	54.7	48.8	52.7	510.70	(316)	55.7	48.8	51.7	512.69	(97)	53.8	47.9	52.7	505.74
BRAZIL	(2481)	53.8	49.9	53.7	516.72	(899)	55.8	49.9	52.8	518.74	(1582)	52.8	49.8	54.7	515.70
CANADA	(444)	59.6	54.8	58.7	570.65	(193)	59.7	53.9	56.7	558.69	(251)	59.6	55.8	59.7	578.60
CHILE	(831)	54.8	49.8	54.7	521.70	(270)	55.8	48.9	52.8	516.74	(561)	53.8	49.8	55.7	524.68
COLOMBIA	(1830)	54.8	49.9	52.7	515.72	(1008)	55.8	49.9	52.8	519.74	(822)	52.8	48.8	53.7	511.69
COSTA RICA	(492)	55.8	49.9	53.7	523.75	(288)	56.8	49.9	52.7	521.76	(264)	54.8	49.9	54.7	524.73
CUBA	(169)	59.7	53.9	56.7	560.69	(84)	58.8	52.9	54.7	548.78	(83)	60.6	54.9	59.7	573.65
DOMINICA	(226)	54.8	48.9	52.8	512.74	(111)	56.7	50.9	52.8	527.74	(115)	51.7	47.9	51.8	496.71
ECUADOR	(550)	53.8	47.8	51.7	504.78	(337)	54.7	47.8	51.7	506.68	(213)	52.8	47.9	52.8	502.72
EL SALVADOR	(578)	55.7	49.9	52.7	519.70	(420)	55.7	50.9	52.7	522.69	(158)	53.7	49.8	52.8	512.71
GUATEMALA	(298)	56.7	50.9	54.7	532.66	(161)	56.8	51.9	53.7	532.78	(129)	55.7	50.8	55.6	532.62
HAITI	(318)	51.9	48.9	50.8	495.77	(185)	51.9	48.9	49.8	494.76	(125)	50.8	49.9	51.9	498.79
HONDURAS	(399)	55.8	49.9	52.7	520.75	(293)	55.8	50.9	53.7	525.74	(106)	53.8	47.9	52.7	505.75
MEXICO	(3464)	54.8	49.8	54.7	522.68	(951)	56.8	50.9	52.8	525.73	(2513)	54.8	49.8	54.6	521.66
NETH. ANT.	(208)	61.5	54.7	55.6	562.52	(166)	61.8	54.7	55.6	565.51	(42)	60.6	53.7	54.7	552.54
NICARAGUA	(596)	54.7	47.8	51.7	504.64	(434)	55.7	48.8	51.7	509.66	(160)	53.7	46.8	51.6	497.61
PANAMA	(725)	55.8	48.9	52.7	513.73	(466)	55.8	49.9	52.7	518.72	(259)	53.8	47.9	51.7	504.74
PARAGUAY	(52)	53.8	48.8	52.7	512.69	(30)	55.8	49.8	52.7	521.78	(22)	51.8	47.7	52.7	498.64
PERU	(1072)	54.8	49.9	53.8	517.74	(613)	55.7	50.9	52.7	523.72	(459)	52.9	48.9	53.8	510.77
PUERTO RICO	(777)	56.8	50.9	55.8	534.75	(345)	56.8	49.9	53.8	527.78	(432)	56.7	51.9	56.7	540.73
URUGUAY	(148)	56.8	53.9	57.7	552.71	(48)	58.7	54.9	56.7	557.71	(92)	55.8	53.9	57.6	550.71
USA	(281)	59.7	55.9	55.8	549.74	(216)	60.6	56.8	56.7	572.66	(65)	57.8	52.11	53.10	536.93
VENEZUELA	(3934)	52.8	46.8	50.7	490.68	(2366)	52.8	46.8	49.7	488.69	(1568)	51.8	46.8	51.7	493.67
OTHER	(218)	59.6	55.7	58.7	561.62	(166)	59.6	55.7	58.7	564.68	(44)	57.6	53.8	56.8	552.67

TABLE 3.2, CONTINUED

REGION AND COUNTRY	ALL DEGREE SEEKERS					UNDERGRADUATES					GRADUATES				
	(M)	LISTEN M	LISTEN $O	WRITE M	WRITE $O	READ M	READ $O	TOTAL M	TOTAL $O	(M)	LISTEN M	LISTEN $O	WRITE M	WRITE $O	READ M	READ $O	TOTAL M	TOTAL $O
ASIA-TOTAL	(117486)	$2 7		$1 8		$2 8		$14 47		(47606)	$3 8		$0 8		$1 8		$13 69	
AFGHANISTAN	(169)	$1 8		$5 9		$5 8		$70 75		(69)	$2 9		$5 9		$4 9		$69 79	
BANGLADESH	(1005)	$0 8		$1 8		$3 8		$12 72		(438)	$2 8		$1 9		$2 8		$16 78	
BURMA	(194)	$2 8		$9 8		$0 9		$02 75		(123)	$2 8		$9 8		$9 9		$98 75	
CHINA(TAIWAN)	(30731)	$1 6		$0 6		$2 6		$09 53		(5419)	$1 7		$7 7		$9 7		$90 58	
HONG KONG	(21395)	$2 7		$0 7		$2 7		$15 60		(15959)	$3 7		$1 7		$2 7		$19 57	
INDIA	(13706)	$4 8		$5 8		$7 7		$53 71		(1978)	$4 9		$3 9		$4 8		$30 79	
INDONESIA	(3508)	$0 7		$7 7		$0 7		$84 64		(1760)	$2 7		$7 8		$0 7		$91 66	
JAPAN	(12338)	$0 7		$8 8		$9 8		$88 68		(6105)	$9 7		$6 8		$6 8		$72 67	
KOREA	(7475)	$0 7		$0 8		$3 7		$07 61		(2364)	$2 8		$0 8		$9 8		$96 71	
MACAO	(485)	$0 7		$1 7		$1 7		$07 61		(319)	$1 7		$1 7		$2 7		$13 57	
MALAYSIA	(7154)	$7 6		$4 7		$6 7		$59 58		(5444)	$0 6		$4 7		$6 6		$50 57	
NEPAL	(184)	$0 8		$2 8		$4 7		$23 65		(30)	$2 9		$3 8		$4 7		$27 72	
PAKISTAN	(3833)	$3 8		$1 9		$3 8		$21 77		(1869)	$4 8		$0 7		$2 8		$16 82	
PHILIPPINES	(2662)	$9 6		$7 7		$9 7		$80 61		(1887)	$0 7		$4 8		$6 7		$60 65	
SINGAPORE	(1836)	$0 7		$5 8		$7 7		$60 68		(1408)	$0 6		$5 8		$7 7		$68 66	
SRI LANKA	(649)	$6 8		$5 8		$7 7		$60 69		(218)	$0 7		$4 9		$7 8		$60 74	
THAILAND	(8176)	$9 7		$0 7		$7 7		$71 62		(1541)	$0 8		$5 8		$5 8		$65 78	
VIETNAM	(1719)	$3 7		$0 9		$0 8		$03 65		(1313)	$3 7		$0 7		$9 7		$02 63	
OTHER	(267)	$4 7		$0 9		$1 8		$14 71		(170)	$5 7		$9 8		$8 8		$11 65	
EUROPE-TOTAL	(16929)	$7 7		$3 8		$4 8		$46 70		(7468)	$7 7		$2 8		$2 8		$38 72	
AUSTRIA	(150)	$0 8		$7 6		$0 6		$82 51		(80)	$0 6		$7 6		$7 7		$80 54	
BELGIUM	(514)	$9 6		$6 7		$9 5		$79 52		(113)	$0 7		$4 8		$5 7		$50 62	
CYPRUS	(920)	$3 8		$0 9		$0 8		$97 75		(646)	$3 7		$0 8		$0 8		$96 72	
DENMARK	(194)	$1 6		$0 6		$0 6		$00 48		(76)	$1 6		$7 7		$6 6		$70 52	
FINLAND	(288)	$0 5		$7 7		$6 7		$75 54		(156)	$1 5		$6 7		$4 6		$60 52	
FRANCE	(2194)	$6 6		$5 6		$0 5		$65 52		(541)	$6 7		$3 7		$6 6		$50 61	
GERMANY	(1672)	$0 5		$7 6		$0 5		$01 48		(733)	$0 5		$7 6		$7 6		$79 50	
GREAT BRITAIN	(96)	$7 9		$5 9		$5 9		$54 83		(67)	$0 8		$5 8		$6 8		$40 75	
GREECE	(3200)	$9 7		$0 8		$0 8		$10 72		(1691)	$4 8		$0 8		$9 8		$08 73	
ITALY	(1046)	$5 7		$4 7		$7 6		$53 61		(465)	$7 7		$4 8		$6 6		$54 62	
NETHERLANDS	(846)	$2 3		$6 6		$9 5		$94 61		(430)	$2 3		$7 6		$8 5		$91 64	
NORWAY	(802)	$0 5		$5 7		$5 6		$46 52		(404)	$9 6		$4 7		$4 6		$55 55	
POLAND	(243)	$6 7		$1 9		$2 8		$32 78		(94)	$6 7		$1 8		$1 8		$27 78	
PORTUGAL	(253)	$7 7		$2 8		$4 7		$42 66		(131)	$6 7		$1 8		$2 8		$29 69	
ROMANIA	(124)	$7 8		$4 8		$7 8		$59 68		(47)	$0 7		$4 9		$5 9		$59 78	
SPAIN	(518)	$4 7		$2 8		$7 6		$47 61		(133)	$7 7		$2 8		$4 7		$42 63	
SWEDEN	(540)	$3 4		$7 6		$0 6		$09 48		(289)	$3 4		$6 6		$7 6		$04 57	
SWITZERLAND	(523)	$9 5		$6 7		$7 6		$74 51		(287)	$0 5		$6 7		$6 6		$72 54	
TURKEY	(1937)	$3 7		$9 8		$0 8		$05 71		(803)	$3 7		$0 8		$0 8		$98 68	
USSR	(224)	$6 7		$0 8		$0 8		$21 69		(149)	$6 6		$0 8		$0 8		$18 69	
YUGOSLAV	(222)	$5 7		$1 8		$3 8		$20 71		(48)	$7 7		$3 8		$2 7		$40 78	
OTHER	(431)	$0 6		$5 8		$5 8		$61 68		(178)	$9 6		$4 8		$4 7		$56 66	

TABLE 3.2, CONCLUDED

REGION AND COUNTRY	ALL DEGREE SEEKERS					UNDERGRADUATES					GRADUATES				
	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD	(N)	LISTEN M	LISTEN SD	WRITE M	WRITE SD
MIDEAST-TOTAL	(83487)	50 0	45 0	44 0	464 73	(34230)	51 0	45 0	44 0	464 78	(19177)	49 0	45 0	45 0	468 73
ARAB EMIRATES	(135)	51 7	43 7	42 7	453 59	(107)	51 7	44 7	42 6	455 59	(28)	49 6	43 7	42 7	447 58
BAHRAIN	(224)	52 8	46 9	44 9	472 79	(157)	52 8	46 9	43 9	471 81	(67)	52 7	46 9	46 8	474 74
IRAN	(34421)	50 0	45 0	44 0	461 68	(22278)	51 0	45 0	44 0	463 69	(12146)	48 0	45 0	44 0	456 67
IRAQ	(1089)	49 8	44 9	44 8	458 73	(368)	51 8	45 9	44 8	464 77	(641)	48 8	44 8	44 8	454 70
ISRAEL	(2352)	54 8	51 6	50 9	524 74	(1031)	55 8	50 8	48 9	500 74	(1321)	57 7	53 8	52 9	543 70
JORDAN	(5183)	50 7	44 8	44 8	459 69	(3524)	50 7	44 8	43 7	456 68	(1659)	49 7	45 8	45 8	466 71
KUWAIT	(1128)	49 8	42 8	42 7	441 65	(751)	49 8	42 7	41 7	437 62	(377)	48 8	43 8	43 8	448 69
LEBANON	(4323)	52 7	48 8	47 8	491 72	(3306)	52 7	48 8	47 8	488 68	(1017)	53 8	49 9	49 9	501 82
OMAN	(60)	51 7	45 9	44 8	466 68	(54)	51 7	45 9	44 8	464 70	(6)	51 5	46 8	48 7	482 43
QATAR	(138)	49 7	41 7	40 6	433 60	(125)	49 7	41 7	40 6	434 60	(13)	47 6	39 8	40 5	422 59
SAUDI ARABIA	(3431)	48 7	42 8	41 7	436 66	(2046)	48 8	41 8	40 7	430 65	(1585)	48 7	42 8	42 7	443 66
SYRIA	(645)	52 7	47 8	46 8	481 72	(403)	52 7	46 8	45 8	474 71	(242)	52 7	48 8	48 9	491 73
YEMEN	(158)	50 7	45 8	45 8	466 71	(83)	51 7	47 9	46 8	478 78	(75)	48 6	44 8	44 8	454 65
OTHER	(0)					(0)					(0)				
PACIFIC-TOTAL	(2316)	50 7	43 9	43 8	451 72	(1693)	50 7	44 9	43 8	454 74	(623)	49 7	42 8	42 7	443 68
AMER. SAMOA	(663)	50 8	42 9	41 8	444 75	(416)	50 8	42 9	41 9	445 88	(247)	50 7	41 8	41 7	442 66
AUSTRALIA	(66)	52 8	46 9	46 9	470 82	(47)	51 7	45 8	44 7	460 78	(19)	52 9	50 11	49 12	505 101
CAROLINE I.	(910)	48 7	42 8	42 7	442 66	(724)	48 7	43 8	42 7	444 68	(186)	48 6	41 8	40 6	433 58
FIJI ISLANDS	(86)	55 7	53 8	53 8	535 68	(68)	54 7	54 7	53 8	542 66	(18)	52 7	50 8	51 8	511 71
MARIANA I.	(160)	54 6	46 8	47 7	487 61	(141)	54 6	46 8	46 7	487 62	(19)	53 4	47 7	47 5	490 49
MARSHALL I.	(169)	46 7	39 8	40 6	416 58	(117)	47 7	40 8	41 6	424 62	(52)	43 5	37 7	39 4	397 43
TAHITI	(41)	52 7	49 6	50 6	509 55	(31)	53 6	49 5	51 5	507 47	(10)	50 8	46 8	46 8	479 78
TONGA	(98)	46 5	43 6	43 5	447 46	(69)	46 5	44 5	43 5	450 44	(21)	47 5	42 7	43 6	440 52
WEST SAMOA	(115)	51 7	45 8	45 8	470 68	(71)	53 7	47 8	46 8	484 69	(44)	49 6	43 7	43 7	448 68
OTHER	(16)	54 9	52 11	50 12	519 103	(9)	52 9	47 11	45 12	478 102	(7)	57 8	58 7	57 9	573 77
ALL CONTINENTS	(235738)	52 0	50 0	50 9	505 73	(119592)	52 0	49 0	49 9	499 73	(116146)	52 0	50 0	52 0	511 72

SECTION 4. PERFORMANCE ON TOEFL (TOTAL) OF SELECTED DEMOGRAPHIC AND TESTING-RELATED CLASSIFICATIONS OF POSTSECONDARY-DEGREE-PLANNING CANDIDATES

Analyses reported in the preceding sections have provided information regarding selected academic, demographic, and testing-related characteristics of postsecondary-degree-planning TOEFL candidates who took TOEFL during the period from September 1977 through August 1979. Regarding this candidate population it has been shown, for example, that:

- About half (50.7 percent) were prospective undergraduate and about half (49.3 percent) were prospective graduate students--the undergraduate/graduate division in percent ranged from 89/11 to 15/85 across 25 leading countries.

- Almost one-third (32 percent) reported that they had taken TOEFL previously. For 25 leading countries, the repeater percentage ranged from 4 to 55.

- More than seven in 10 (72 percent) were male and 28 percent were female. Across 25 leading countries, the male/female division, in percent, ranged from 94/6 to 53/47.

- Some 29 percent were tested in centers in the U.S.A. or Canada (domestic centers) and 71 percent were tested elsewhere (in foreign centers). For 25 leading countries, the percent tested in domestic centers ranged from 6 to 66.

- Only 43 percent requested that their TOEFL score results be reported to U.S. higher education institutions at the time of most recent testing; 50 percent failed to designate any institution or agency to receive their TOEFL scores (which were thus transmitted only to the examinees). Nonreporting ranged from 25 percent to 70 percent across the 25 leading countries of origin of postsecondary-degree-planning candidates.

Table 4.1 presents TOEFL total score means for all candidates classified according to these variables, generally and by TOEFL region, and for candidates from each of the 25 leading countries of origin of postsecondary-degree planners (see Section 3 for description of TOEFL scales). Although differences in performance on TOEFL (total and section scores) for undergraduate- and graduate-degree planners were considered in detail in Section 3, TOEFL total means for these subgroups are included in Table 4.1 for general comparative purposes.

For the designated candidate classifications, Table 4.1 indicates the following patterns of differences in mean TOEFL total:

- Graduate-degree planners had higher TOEFL total means than undergraduate-degree planners (511 and 499, respectively)--true for 18 of the 25 leading countries, as noted in the preceding section.

TABLE 4.1

MEAN TOEFL TOTAL SCORES FOR DEMOGRAPHIC AND TESTING-RELATED CANDIDATE CLASSIFICATIONS BY TOEFL REGION, AND BY TWENTY-FIVE LEADING COUNTRIES OF ORIGIN: DEGREE PLANNING CANDIDATES IN INTERNATIONAL AND SPECIAL TESTING PROGRAMS

1977-78 & 1978-79

REGION AND COUNTRY	NO. OF DEGREE SEEKERS	DEGREE SEEKERS			SEX		TEST CENTER		SELF-REPORTED REPEATERS	SCORE REPORT PATTERNS**			
		U.G.	GRAD.	TOTAL	MEN	WOMEN	FOREIGN	U. S.-CANADA		FOR.	U.S.	BOTH	NONE
AFRICA-TOTAL	(24952)	509	517	511	509	523	514	497	489	524	523	525	494
GHANA	(2193)	557	585	561	561	564	562	558	555	554	565	562	555
NIGERIA	(13557)	509	553	511	510	515	509	542	512	516	517	513	502
AMERICA-TOTAL	(21048)	516	517	517	514	521	525	505	500	530	529	540	496
BRAZIL	(2481)	518	515	516	514	520	517	511	502	516	527	534	499
COLOMBIA	(1830)	519	511	515	515	517	525	500	509	517	527	540	496
MEXICO	(3464)	525	521	522	520	530	526	515	513	525	531	544	504
VENEZUELA	(3934)	488	493	490	490	491	513	476	482	506	508	518	474
ASIA-TOTAL	(1174886)	513	518	516	516	516	516	514	509	520	535	541	499
CHINA (TAIWAN)	(307311)	490	514	509	510	509	509	513	509	495	535	538	494
HONG KONG	(213951)	519	505	515	513	519	509	530	520	541	533	543	505
INDIA	(137041)	538	556	553	550	570	555	538	528	545	561	570	530
INDONESIA	(3508)	491	477	484	481	493	482	493	490	493	495	500	476
JAPAN	(123381)	472	504	488	485	493	493	477	495	499	498	521	478
KOREA	(74751)	494	513	507	510	500	508	506	512	501	519	524	494
MALAYSIA	(71541)	558	559	559	554	571	563	546	538	567	574	575	545
PAKISTAN	(38331)	518	524	521	518	550	521	523	513	503	538	530	504
PHILIPPINES	(26621)	560	594	580	586	580	587	563	559	566	586	584	566
SINGAPORE	(18361)	548	567	568	568	569	569	553	527	578	593	580	549
THAILAND	(81761)	464	472	471	467	479	469	478	480	481	488	494	459
EUROPE-TOTAL	(169291)	538	553	546	542	556	547	540	519	539	559	565	528
FRANCE	(21941)	550	570	565	565	565	563	575	557	561	569	566	556
GREECE	(32001)	508	514	510	508	517	513	502	506	505	522	548	502
TURKEY	(19371)	498	510	505	499	530	509	491	499	503	519	526	487
MIDEAST-TOTAL	(53407)	464	465	464	462	475	474	456	467	473	487	505	452
IRAN	(34421)	463	456	461	460	464	467	458	469	450	485	497	451
ISRAEL	(2352)	509	543	528	521	550	528	526	507	532	537	548	511
JORDAN	(5183)	456	466	459	454	509	465	445	464	470	472	503	453
LEBANON	(4323)	488	501	491	488	532	498	481	486	500	510	521	469
SAUDI ARABIA	(3631)	430	443	436	435	457	454	425	440	440	452	453	429
PACIFIC-TOTAL	(2316)	454	443	451	448	456	450	463	447	449	462	450	444
ALL CONTINENTS	(2357738)	499	511	505	502	513	512	488	496	514	526	534	486

*EXCEPT FOR "NO. OF DEGREE SEEKERS" (ON WHICH THE TABLE IS BASED) ALL NUMBERS ARE MEANS. MEANS BASED ON N'S LESS THAN 15 ARE FOLLOWED BY "(*)". WHEN THE NUMBER OF CASES IS 0 "---" IS SUBSTITUTED FOR THE MEAN.
**FOR. = EMBASSY, AGENCY, FOUNDATION, FOREIGN HIGHER INSTITUTION; U.S. = U.S. COLLEGE OR UNIVERSITY.

- Among degree planners, women tended to do better than men on TOEFL total (means of 513 and 502, respectively)--true for 21 of the 25 leading countries.

- Candidates tested in foreign centers tended to outperform those tested in the United States or Canada (means of 512 and 488, respectively)--true for 18 of the 25 leading countries.

- Self-reported repeaters, at time of most recent testing, tended to have lower TOEFL scores than degree planners generally (mean of 496 as compared to a mean of 505 for all degree planners, including repeaters)--true for 15 of the 25 leading countries.

- Candidates failing to designate any institution or agency to receive their TOEFL scores earned substantially lower mean scores than candidates who designated receiving institutions or agencies--true for all 25 leading countries.

  For example, the mean TOEFL total of 486 for nonreporting candidates is more than 0.5 standard deviation units lower than the mean (526) for candidates who designated U.S. higher education institutions and 0.6 sigma units lower than the mean (534) for the relatively small group designating both U.S. higher education institutions and U.S.-based agencies or foreign higher education institutions. It is noteworthy that means for candidates reporting to U.S. colleges or universities, or other institutions, were higher than the mean for all graduate-degree planners (i.e., 511).

Formal explication of these trends, of course, is outside the scope of a descriptive assessment of candidate characteristics and test-taking behavior. However, some of the factors that appear to be relevant to an informed evaluation of the observed trends may be considered briefly.

- The fact that for each of the 25 leading countries, score-reporting candidates had a higher TOEFL total mean than their nonreporting counterparts is consistent with a general hypothesis, advanced in Section 2, that reporting vs. nonreporting behavior reflects relative readiness (contingent in part on level of English proficiency) of candidates to become formal applicants for admission to undergraduate or graduate study in the United States or Canada. Prospective degree-seekers who do not report their scores to institutions may be interested primarily in assessing their level of English-language proficiency before proceeding with formal application for admission, an action that is likely to be contingent in part on reaching some criterion-level of performance on TOEFL.

- Although repeater means were lower than all-candidate means for candidates from 15 of the 25 leading countries, repeaters had higher means in nine country groups (Iran, Jordan, Saudi Arabia, Thailand, Korea, Japan, Indonesia, Hong Kong, and Nigeria) and equal means in one (Taiwan). In evaluating these trends it is

useful to consider the fact that, for the nine countries in which repeater means were higher than all-candidate means, (a) the median all-candidate mean tended to be low (484 as compared to 505 for all candidates without regard to country) and (b) the median percentage of repeater candidates was high (44 percent as compared to 32 percent of all candidates without regard to country). The scores for repeaters were, of course, their most recent scores and presumably were higher, on the average, than their first-time scores. When initial TOEFL performance for a native country group is relatively low, it is plausible to expect not only a relatively high incidence of repetition (presumably interspersed with additional ESL training), but also that repeating TOEFL candidates should tend to outperform the first-time examinees (with comparatively low scores).

It is generally consistent with this line of reasoning to find that country contingents in which repeater means were much lower than all-candidate means were characterized by high initial test-score means (median = 553) and low incidence of repeated test-taking (median = 13 percent).*

- Why candidates tested in the United States or Canada, generally--and those from 18 of the 25 leading native country groups--should have lower mean scores on TOEFL than their counterparts tested elsewhere cannot readily be rationalized. A variety of selective factors may be involved. For example, countries for which domestic-tested candidates had higher means than foreign-tested candidates (Nigeria, Taiwan, Hong Kong, Indonesia, Pakistan, Thailand, and France) were characterized by a proportionately smaller than average contingent of domestic-tested candidates (median = 16 percent) as compared to 29 percent of all candidates without regard to country.**

- That women should tend to have higher TOEFL scores than men among degree planners in the TOEFL candidate population generally, and in contingents from 21 of 25 leading countries as well, is perhaps due primarily to selective factors. Women make up a minority of all degree-planning candidates (28 percent). It is perhaps relevant to note that the four countries in which TOEFL means for

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*For Brazil, Colombia, India, Malaysia, Israel, the Philippines, and Singapore, repeater means were 14 to 28 points lower than all-candidate means.

**Countries with proportionately smaller contingents of candidates tested in the United States may offer more favorable and effective opportunities to learn English than countries with proportionately larger contingents tested in the United States. These latter contingents may come to the United States to obtain what they may perceive to be better and more efficient ESL instruction than that available locally.

men were either somewhat higher than or equal to those for women were characterized by a higher than average percentage of women (Taiwan, 41, Korea, 31, Philippines, 53, and France, 34, as compared to 29 percent overall).

- The somewhat anomalous finding that prospective graduate students earned lower TOEFL total scores than prospective undergraduate students in contingents from Brazil, Colombia, Mexico, Hong Kong, Indonesia, Singapore, and Iran is considered in detail in Section 3. At this point it is sufficient to call attention to the fact that in six of these seven contingents the Reading Comprehension mean for graduate-degree planners was equal to or higher than the mean for undergraduate planners. Undergraduate planners were consistently higher than graduate planners only on the Listening section. Thus the higher TOEFL total means of undergraduate planners were due primarily to their consistently higher performance on the Listening Comprehension section.

Table 4.2 presents data, comparable to that in Table 4.1 for the 25 leading countries, for contingents from 105 countries.

TABLE 4.2

MEAN TOEFL TOTAL SCORES FOR DEMOGRAPHIC GROUPS BY REGION AND COUNTRY:
UNDERGRADUATE AND GRADUATE DEGREE SEEKERS
INTERNATIONAL AND SPECIAL TESTING PROGRAMS ONLY

1977-78 & 1978-79

REGION AND COUNTRY	NO. OF DEGREE SEEKERS	DEGREE SEEKERS			SEX		TEST CENTER		SELF-REPORTED REPEATERS	SCORE REPORT PATTERN**			
		U.G.	GRAD.	TOTAL	MEN	WOMEN	FOREIGN	U. S.-CANADA		FOR.	U.S.	BOTH	NONE
AFRICA-TOTAL	(24552)	509	517	511	509	523	514	497	489	524	523	525	494
ALGERIA	(437)	495	505	502	500	529	509	503	506	543(*)	513	548(*)	493
CAMEROON	(336)	528	531	529	528	530	526	543	522	534(*)	534	536	514
EGYPT	(1676)	475	478	478	473	501	478	477	471	490	488	513	462
ETHIOPIA	(474)	508	536	515	517	509	515	514	503	504	528	498	502
GHANA	(2193)	557	585	561	561	564	562	550	555	554	565	562	555
IVORY COAST	(195)	476	490	485	484	494	458	503	505	478(*)	485	479(*)	489
KENYA	(888)	542	570	546	543	556	544	561	537	566	545	536	548
LIBERIA	(260)	506	552	523	516	546	525	504	518	538(*)	533	547(*)	502
LIBYA	(1411)	416	448	431	430	454	445	427	435	478	446	483(*)	427
MOROCCO	(191)	514	542	533	533	533	530	511	531	560(*)	535	563(*)	526
NIGERIA	(13557)	505	553	511	510	515	508	542	512	516	517	513	502
RHODESIA	(436)	553	586	559	560	555	559	560	566	579	561	559	548
SOUTH AFRICA	(168)	565	616	594	593	595	596	576	497(*)	604(*)	600	583(*)	569
SIERRA LEONE	(196)	522	556	530	532	530	532	527	533	547(*)	530	550(*)	503
SOMALIA	(165)	481	492	484	485	484	487	472	461	539(*)	501	489(*)	472
SUDAN	(570)	452	479	475	473	478	474	483	481	425	484	502	465
TANZANIA	(301)	530	561	542	542	546	539	566	542	573	535	550	545
UGANDA	(147)	553	575	560	564	552	558	565	531(*)	570(*)	567	553(*)	539
ZAIRE	(142)	443	481	461	454	498	451	489	478	457(*)	460	491(*)	459
ZAMBIA	(183)	544	573	557	557	557	563	516	467(*)	548(*)	546	551(*)	538
OTHER	(626)	500	512	506	499	532	506	509	505	524	515	528	488
AMERICA-TOTAL	(21048)	516	517	517	514	521	525	505	500	530	529	540	496
ARGENTINA	(586)	553	552	552	549	559	551	555	533	548	557	551	543
BOLIVIA	(413)	512	505	510	506	523	522	496	497	493(*)	520	521(*)	497
BRAZIL	(2481)	510	515	516	514	520	517	511	502	516	527	534	499
CANADA	(4441)	558	570	570	576	558	543	573	535	570	577	595	549
CHILE	(831)	516	524	521	520	524	521	521	510	535	533	520	504
COLOMBIA	(1830)	519	511	515	515	517	525	500	509	517	527	540	496
COSTA RICA	(492)	521	524	523	519	538	529	499	500	533	534	548	507
CUBA	(169)	548	573	560	565	552	563	550	549	613(*)	560	556(*)	541
DOMINICA	(226)	527	496	512	513	509	510	503	496	535	516	549	489
ECUADOR	(550)	506	502	504	501	512	505	503	506	542(*)	513	522	488
EL SALVADOR	(570)	522	512	519	517	523	531	502	508	493(*)	530	550(*)	504
GUATEMALA	(290)	532	532	532	529	538	541	514	522	545(*)	542	537(*)	522
HAITI	(310)	494	498	495	486	510	484	509	503	463(*)	504	497	478
HONDURAS	(399)	525	505	520	508	535	544	490	498	530	530	559	492
MEXICO	(3464)	525	521	522	520	530	526	515	513	525	531	544	504
NETH. ANT.	(208)	565	552	562	558	567	565	552	553	566(*)	569	564(*)	549
NICARAGUA	(596)	509	497	506	503	510	521	497	500	506	518	533	491
PANAMA	(725)	510	504	513	510	518	519	497	500	515	520	520	492
PARAGUAY	(52)	521	498	512	503	527	506	520	497(*)	409(*)	536	0(*)	507
PERU	(1072)	523	510	517	511	530	517	517	504	561	525	531	499
PUERTO RICO	(777)	527	540	534	537	532	535	533	501	508(*)	537	539	515
URUGUAY	(140)	557	550	552	543	570	559	524	533(*)	547(*)	554	572(*)	539
USA	(281)	572	536	564	550	571	563	566	507	506(*)	568	588(*)	551
VENEZUELA	(3934)	488	493	490	490	491	515	476	482	506	508	518	476
OTHER	(210)	564	552	561	556	568	559	567	548(*)	557(*)	574	609(*)	548

TABLE 4.2, CONTINUED

REGION AND COUNTRY	NO. OF DEGREE SEEKERS	DEGREE SEEKERS			SEX		TEST CENTER		SELF-REPORTED REPEATERS	SCORE REPORT PATTERN**			
		U.G.	GRAD.	TOTAL	MEN	WOMEN	FOREIGN	U. S.-CANADA		FOR.	U.S.	BOTH	NONE
ASIA-TOTAL	(117486)	513	518	516	516	516	516	514	509	520	535	541	499
AFGHANISTAN	(169)	464	474	470	467	483	470	470	482	473	472	512	451
BANGLADESH	(1009)	516	509	512	508	552	511	526	513	515	526	544	497
BURMA	(194)	498	509	502	504	499	504	498	487	475(*)	521	534(*)	484
CHINA (TAIWAN)	(30731)	490	514	509	510	509	509	513	509	498	535	538	494
HONG KONG	(21395)	519	505	515	513	519	509	530	520	541	533	543	505
INDIA	(13704)	538	556	553	550	570	555	538	528	545	561	570	530
INDONESIA	(3508)	491	477	484	481	493	482	493	490	493	495	508	476
JAPAN	(12338)	472	504	488	485	493	493	477	495	499	498	521	478
KOREA	(7475)	494	513	507	510	508	508	506	512	501	519	524	494
MACAO	(485)	513	495	507	500	516	502	533	512	499	534	508	504
MALAYSIA	(7154)	558	559	559	554	571	563	546	538	547	574	575	545
NEPAL	(186)	527	522	523	528	508	525	498(*)	504	576(*)	532	540(*)	511
PAKISTAN	(3833)	518	524	521	518	550	521	523	513	503	538	530	504
PHILIPPINES	(2662)	560	594	580	580	580	587	563	559	566	586	584	566
SINGAPORE	(1836)	568	567	568	568	569	569	553	527	578	593	580	549
SRI LANKA	(649)	548	555	560	554	573	559	571	546	522	575	565	547
THAILAND	(8176)	464	472	471	467	478	469	478	480	481	488	494	459
VIETNAM	(1719)	502	505	503	503	504	510	502	502	520	508	526	489
OTHER	(267)	511	520	514	519	504	539	493	512	539	517	555(*)	498
EUROPE-TOTAL	(14929)	538	553	546	542	556	547	540	519	539	559	568	528
AUSTRIA	(150)	580	583	582	579	588	583	573	564(*)	572(*)	586	602(*)	566
BELGIUM	(514)	558	585	579	578	581	579	574	559	578	585	605	564
CYPRUS	(920)	496	499	497	495	507	497	504	479	493	518	534	483
DENMARK	(194)	578	594	588	587	589	588	585	569(*)	586(*)	588	583(*)	567
FINLAND	(288)	568	582	575	572	577	576	569	543(*)	581	575	602(*)	570
FRANCE	(2194)	550	570	565	565	565	563	575	557	561	569	566	556
GERMANY	(1672)	579	583	581	578	585	579	592	574	586	585	596	572
GREAT BRITAIN	(96)	560	548	554	545	571	546	590	519(*)	520(*)	594	520(*)	526
GREECE	(3200)	508	514	510	508	517	513	502	506	505	522	548	502
ITALY	(1046)	554	552	553	552	555	553	552	546	559	556	562	545
NETHERLANDS	(846)	591	601	596	596	595	595	602	588	602	599	601	587
NORWAY	(802)	555	576	566	564	566	565	584	554	579	567	590	559
POLAND	(243)	527	535	532	531	533	533	531	525	517	543	561(*)	515
PORTUGAL	(253)	529	557	542	542	543	553	527	514	523	543	561	534
ROMANIA	(124)	559	559	559	557	562	559	559	497(*)	568(*)	566	617(*)	535
SPAIN	(518)	542	549	547	543	556	550	539	530	571	550	571	537
SWEDEN	(540)	584	594	589	589	589	587	604	593	607(*)	592	611(*)	579
SWITZERLAND	(523)	572	576	574	571	582	573	581	557	588	580	592	561
TURKEY	(1937)	498	510	505	499	530	509	491	499	503	519	526	487
USSR	(224)	518	526	521	526	516	518	525	506	537(*)	520	413(*)	521
YUGOSLAVIA	(222)	540	525	528	524	537	529	528	519	543	535	544(*)	503
OTHER	(431)	556	564	561	562	558	564	554	528	564	575	583	531

TABLE 4.2, CONCLUDED

REGION AND COUNTRY	NO. OF DEGREE SEEKERS	DEGREE SEEKERS			SEX		TEST CENTER		SELF-REPORTED REPEATERS	SCORE REPORT PATTERN**			
		U.G.	GRAD.	TOTAL	MEN	WOMEN	FOREIGN	U. S.-CANADA		FOR.	U.S.	BOTH	NONE
MIDEAST-TOTAL	(53487)	464	465	464	462	478	474	456	467	473	487	508	482
ARAB EMIRATES	(135)	455	447	453	453	458(*)	449	455	461	---(*)	483	480(*)	441
BAHRAIN	(224)	471	474	472	465	497	478	458	469	458(*)	485	513(*)	463
IRAN	(34421)	463	456	461	460	464	467	458	469	458	485	497	451
IRAQ	(1809)	464	454	458	456	471	461	452	463	494	465	474	449
ISRAEL	(2352)	508	543	528	521	550	528	526	507	532	537	548	511
JORDAN	(5183)	456	466	459	454	509	465	445	464	478	472	503	453
KUWAIT	(1128)	437	448	441	436	475	447	434	458	460	458	452	434
LEBANON	(4323)	488	501	491	488	532	498	481	486	508	518	521	469
OMAN	(60)	464	482(*)	466	462	503(*)	477	457	472	---(*)	474	---(*)	461
QATAR	(138)	434	422(*)	433	432	487(*)	464	425	437	487(*)	489	463(*)	423
SAUDI ARABIA	(3631)	438	443	436	435	457	454	425	440	468	482	453	429
SYRIA	(645)	474	491	481	478	501	498	466	481	514	491	537	459
YEMEN	(158)	478	454	466	463	511(*)	473	447	483	483(*)	479	499(*)	458
OTHER	(0)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)	---(*)
PACIFIC-TOTAL	(2316)	454	443	451	448	456	458	463	447	449	462	458	444
AMERICAN SAMOA	(663)	445	442	444	437	451	444	438	429	445	456	448	437
AUSTRALIA	(66)	468	505	478	479	476(*)	504	452	462	496(*)	496(*)	513(*)	465
CAROLINE ISLANDS	(918)	444	433	442	438	447	441	458	456	429	446	437	448
FIJI ISLANDS	(86)	542	511	535	539	526	533	554(*)	542(*)	538(*)	529	530(*)	546
MARIANA ISLANDS	(168)	487	490	487	488	486	488	488	468	367(*)	488	539(*)	483
MARSHALL ISLANDS	(169)	424	397	416	411	429	415	426(*)	419	412	428	448(*)	404
TAHITI	(41)	507	479(*)	500	516	487	463(*)	514	517(*)	567(*)	500	---(*)	491
TONGA	(98)	458	448	447	438	456	445	478(*)	437(*)	448(*)	478(*)	448	410(*)
WEST SAMOA	(115)	484	448	478	469	473	467	530(*)	467(*)	518	485	457	482
OTHER	(16)	478(*)	573(*)	519	523(*)	512(*)	544(*)	413(*)	463(*)	---(*)	542(*)	586(*)	434
ALL CONTINENTS	(235738)	499	511	505	502	513	512	488	496	514	526	534	486

*EXCEPT FOR "NO. OF DEGREE SEEKERS" (ON WHICH THE TABLE IS BASED) ALL NUMBERS ARE MEANS. MEANS BASED ON N'S LESS THAN 15 ARE FOLLOWED BY "(*)". WHEN THE NUMBER OF CASES IS 0 "---" IS SUBSTITUTED FOR THE MEAN.
**FOR. = EMBASSY, AGENCY, FOUNDATION, FOREIGN HIGHER INSTITUTION; U.S. = U.S. COLLEGE OR UNIVERSITY.

SECTION 5. DISTRIBUTION AND TOEFL TOTAL MEANS OF GRADUATE-DEGREE-PLANNING CANDIDATES BY INTENDED AREA OF STUDY

Slightly fewer than half (49.3 percent) of postsecondary-degree-planning TOEFL candidates during the two-year period from September 1977 through August 1979 indicated that they were taking TOEFL in connection with plans to study for graduate degrees in U.S. or Canadian institutions. TOEFL candidates "applying for graduate study" are instructed to find the name of the department (field) in which they plan to study in a list provided in the TOEFL Handbook for Examinees (formerly the Handbook for Applicants; see Exhibit 5A).

If a candidate does not enter any department code (including "99" for an unlisted department), the TOEFL office will consider the address incomplete and will send a score report to the candidate only.

Table 5.1 shows the mean TOEFL total score and the percentage of graduate-degree planners in each of several classifications with respect to intended field or department:

- Designated a graduate department in humanities, social sciences, biological sciences, or physical sciences (see Exhibit 5A for fields included in each area)
- Designated a school of business or law
- Did not designate any intended department or school (or designated one not listed in Exhibit 5A).

Data are provided for all graduate planners without regard to country ("all continents") and by TOEFL region, and for candidates from the 25 leading countries of origin of degree planners (undergraduate and graduate) classified by TOEFL region.

It is evident from Table 5.1 that a very high percentage of all graduate planners did not designate departments; the "other" category accounted for 60 percent of all candidates (which includes only a small number of candidates designating an unlisted field). There are marked differences by TOEFL region and among the 25 leading countries in this regard.

- Almost three-fourths (74 percent) of candidates from the Mid-eastern region did not designate departments, and 85 percent of the relatively small number of graduate planners from the TOEFL Pacific region failed to do so; however, 50 percent or more of those from Africa, the Americas, and Europe designated departments.
- Candidates from the two regions with the highest percentages of candidates not designating specific departments, or entering "99" for "department not listed," were lowest on TOEFL total.

Exhibit 5A

Departments (Fields) of Graduate Study Classified By Broad Areas, and Instructions to TOEFL Candidates: From the TOEFL Handbook for Applicants, 1979-80

LIST B: Department Codes

This list is to be used only by students applying for graduate study. All others are to fill in 00 as the department code for each institution or agency they list on the chart and in area 4 of the admission ticket and answer sheet.

Business Schools: Use 02 if you are applying to a graduate school of management (business).

Law Schools: Use 03 if you are applying to a graduate school of law.

Graduate Schools: If you are applying for graduate study in a field other than business or law, copy the appropriate code from the list below.

HUMANITIES
11 Archaeology
12 Architecture
26 Art History
13 Classical Languages
28 Comparative Literature
53 Dramatic Arts
14 English
29 Far Eastern Languages and Literature
15 Fine Arts, Art, Design
16 French
17 German
58 Italian
04 Linguistics
19 Music
57 Near Eastern Languages and Literature
20 Philosophy
21 Religious Studies or Religion
22 Russian
23 Spanish
24 Speech
10 Other modern languages
98 Other humanities

SOCIAL SCIENCES
27 American Studies
01 Anthropology
03 Communications
04 Economics
05 Education (including M.A. in Teaching)
01 Educational Administration
09 Educational Psychology
70 Geography
92 Government
06 History
07 Industrial Relations and Personnel
08 International Relations
10 Journalism
90 Library Science
91 Physical Education
92 Political Science
93 Psychology
94 Public Administration
55 Slavic Studies
79 Social Psychology
95 Social Work
96 Sociology
97 Urban Development (Regional Planning)

BIOLOGICAL SCIENCES
31 Agriculture
32 Anatomy
05 Audiology
33 Bacteriology
34 Biochemistry
35 Biology
36 Biophysics
37 Botany
38 Dentistry
39 Entomology
40 Forestry
06 Genetics
41 Home Economics
25 Hospital and Health Services Administration
42 Medicine
07 Microbiology
43 Nursing
77 Nutrition
44 Occupational Therapy
45 Optometry
46 Osteopathy
08 Parasitology
56 Pathology
47 Pharmacy
48 Physical Therapy
49 Physiology
50 Public Health
51 Veterinary Medicine
52 Zoology
30 Other biological sciences

PHYSICAL SCIENCES
54 Applied Mathematics
61 Astronomy
62 Chemistry
78 Computer Sciences
63 Engineering, Aeronautical
64 Engineering, Chemical
65 Engineering, Civil
66 Engineering, Electrical
67 Engineering, Industrial
68 Engineering, Mechanical
69 Engineering, other
71 Geology
72 Mathematics
73 Metallurgy
74 Mining
75 Oceanography
76 Physics
59 Statistics
60 Other physical sciences
Use 99 for any department not listed.

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TABLE 5,1

FIELDS (DEPARTMENTS) OF INTENDED GRADUATE STUDY OF GRADUATE DEGREE PLANNING CANDIDATES AND CORRESPONDING MEAN TOTAL SCORES ON TOEFL BY TOEFL REGION, AND BY TWENTY-FIVE LEADING COUNTRIES OF ORIGIN CLASSIFIED BY REGION: INTERNATIONAL AND SPECIAL TESTING PROGRAMS

1977-78 & 1978-79

REGION AND COUNTRY	TOTAL (ALL FIELDS)		MEANS BY FIELD							PER CENTS BY FIELD***						
	N	MEAN	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**
AFRICA-TOTAL	(6136)	517	547	543	529	533	554	545	495	4	12	11	14	9	1	50
GHANA	(346)	585	594	597	580	590	602	---	[illegible]	6	16	13	18	14	0(*)	32
NIGERIA	(1485)	553	550	560	566	571	569	591	537	4	17	15	15	11	0(*)	38
AMERICA-TOTAL	(10649)	517	537	533	514	522	553	552	503	5	12	8	16	9	1	49
BRAZIL	(1482)	515	547	518	499	521	551	540	505	6	13	7	17	7	2	48
COLOMBIA	(822)	511	494	526	511	511	542	497	504	6	11	9	12	11	1(*)	50
MEXICO	(2513)	521	540	538	511	523	550	556	506	2	12	8	22	12	1	42
VENEZUELA	(1568)	493	509	507	497	520	534	509	480	4	9	5	14	6	1(*)	62
ASIA-TOTAL	(69880)	518	531	533	536	544	557	541	502	3	7	4	16	8	0	61
CHINA (TAIWAN)	(25312)	514	537	536	542	537	546	549	505	2	4	3	12	4	0	74
HONG KONG	(5436)	505	523	540	550	538	566	550	493	2	6	2	6	6	0(*)	78
INDIA	(11734)	556	571	577	546	564	575	554	534	2	5	1	39	14	0	30
INDONESIA	(1748)	477	486	478	483	483	520	502	473	2	11	1	10	2	1(*)	66
JAPAN	(6233)	504	514	513	490	506	535	530	496	1	11	2	9	9	1	60
KOREA	(5111)	513	515	531	510	523	562	557	503	1	12	4	16	8	0	55
MALAYSIA	(1710)	559	564	573	587	579	596	663	541	1	17	7	8	11	0(*)	53
PAKISTAN	(1964)	524	534	532	520	535	562	535	510	2	5	1	27	9	1	50
PHILIPPINES	(1575)	594	600	606	577	599	616	613	579	1	14	12	14	21	1	34
SINGAPORE	(428)	567	578	601	583	569	620	643	540	3(*)	10	1(*)	8	21	0(*)	56
THAILAND	(6635)	472	508	479	488	495	490	503	465	3	10	3	7	8	1	69
EUROPE-TOTAL	(9481)	553	571	569	554	550	580	585	539	6	10	4	19	12	3	47
FRANCE	(1653)	570	572	571	552	571	586	569	562	7	8	3	26	19	4	33
GREECE	(1509)	514	541	521	525	528	550	558	504	3	8	4	16	5	0(*)	64
TURKEY	(1134)	510	531	537	513	521	539	465	492	3	7	2	31	10	0(*)	47
MIDEAST-TOTAL	(19177)	465	507	498	480	492	519	533	453	2	6	3	11	4	0	74
IRAN	(12146)	456	485	487	466	482	493	499	449	1	5	3	10	3	0(*)	78
ISRAEL	(1321)	543	555	563	529	553	560	577	525	6	17	4	21	10	1(*)	41
JORDAN	(1659)	466	522	499	501	470	504	---	458	3	5	4	8	2	0(*)	77
LEBANON	(1017)	501	523	560	567	517	578	530	485	1(*)	3	4	12	7	1(*)	72
SAUDI ARABIA	(1585)	443	490	440	486	487	527	---	432	3	9	2	9	3	0(*)	75
PACIFIC-TOTAL	(623)	463	451	462	491	486	479	---	438	2(*)	5	4	2(*)	2(*)	0(*)	85
ALL CONTINENTS	(116146)	511	536	533	526	536	556	558	494	3	8	5	15	8	1	60

*GRADUATE DEGREE SEEKERS ONLY; EXCLUDES ALL CANDIDATES REPORTING OTHER REASONS FOR TAKING TOEFL.
**PREDOMINANTLY NO RESPONSE; ALSO INCLUDES FIELD NOT LISTED.
***PER CENTS BASED ON N'S LESS THAN 15 ARE FOLLOWED BY "(*)". WHEN THERE ARE NO CASES "---" REPLACES THE MEAN.

Generally speaking, candidates designating specific departments, regardless of field, had higher TOEFL total means than candidates who did not do so.

- At the "all continents" level, for example, the mean of 494 for the large "other" (nondesignating) group is from 0.4 to almost 0.9 standard deviations lower than means for candidates designating areas of study.

- Among the 25 leading countries, almost without exception, the mean for nondesignating candidates is lower than the mean for any classification of candidates by designated field.

Among all prospective graduate-level candidates the percentages designating each area of intended study are shown below.

Intended area of study	Percentage base	
	Field designators only	All graduate-degree planners
No field designated.....	—	(60)
Physical science.....	38	(15)
Biological science.....	12	(5)
Social science.....	20	(8)
Arts and humanities.....	8	(3)
Business school.....	20	(8)
Law school.....	1	(1)

The entries in parentheses indicate the percentages, from Table 5.1, of all graduate-degree planners, in various response categories.

According to estimates of the distribution of foreign students in the United States in 1978-79 by field of study but without regard to level (Boyan, 1980), some 34 percent were enrolled in physical science fields, 17 percent in biosciences, 20 percent in social sciences, 11 percent in arts and humanities, 16 percent in business and management, and 1 percent in law. Thus, these graduate-degree planners generally appear to be distributed by intended field in much the same way as enrolled foreign students, both graduate and undergraduate. However, differences among the leading countries are evident.

- Contingents of prospective graduate students from some countries are heavily concentrated in one intended area of study while those from other countries are rather widely distributed among the intended areas.

- At the same time, it can be seen from Table 5.1 that for a majority (15) of the 25 leading countries, physical science fields attracted the largest proportion of candidates; social

sciences were most frequently indicated by candidates from five countries and business school by candidates from two countries.

The very small group of candidates planning to attend law school had the highest mean TOEFL total score (558), but the mean for prospective business school students was almost as high (556). For 19 of the 25 leading countries, the mean for prospective business students was higher than means for students oriented toward any of the arts and sciences fields.

However, perhaps the most important observation regarding the data on TOEFL scores is that the means for candidates designating fields, by and large, are higher than the means for all graduate planning candidates (including, of course, those not designating fields, who characteristically have lower TOEFL scores).

- It is reasonable to infer, following a line of reasoning developed in previous sections, that candidates designating fields are much nearer the formal application-for-admission stage of the candidate-flow process than those who fail to do so. It is also reasonable to infer that the mean TOEFL scores for candidates designating fields constitute a better estimate of the level characteristic of "prospective applicants for admission" than the mean for all graduate-degree-planning TOEFL candidates.*

Table 5.2 provides data on the variables under consideration in this section for graduate-degree planning candidates from each of 105 native countries (which collectively accounted for 99.2 percent of all the degree planners, graduate and undergraduate).

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*For the 25 countries in Table 5.1, the correlation between the percentage of graduate planners not naming fields and the percentage of all planners (graduate and undergraduate) not designating institutions to receive score reports is very high, r = .93.

TABLE 5.2

TOEFL TOTAL SCORES FOR FIELDS OF STUDY BY REGION AND COUNTRY: GRADUATE DEGREE SEEKERS ONLY (INTERNATIONAL AND SPECIAL PROGRAMS ONLY)*

1977-78 & 1978-79

REGION AND COUNTRY	TOTAL (ALL FIELDS)		MEANS BY FIELD							PER CENTS BY FIELD***						
	N	MEAN	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**
AFRICA-TOTAL	(6136)	517	547	543	529	533	554	545	495	4	12	11	14	9	1	50
ALGERIA	(317)	505	502	478	504	524	555	488	499	2(*)	7	3(*)	21	3(*)	1(*)	63
CAMEROON	(97)	531	525	553	526	547	545	573	510	4(*)	13(*)	13(*)	8(*)	14(*)	7(*)	37
EGYPT	(1267)	478	505	485	472	500	514	419	467	3	6	10	21	5	0(*)	55
ETHIOPIA	(110)	536	557	502	528	572	577	---	517	2(*)	6(*)	10(*)	12(*)	11(*)	0(*)	59
GHANA	(346)	508	594	597	580	590	602	---	569	6	16	13	10	14	0(*)	32
IVORY COAST	(129)	490	516	492	453	468	512	590	481	3(*)	12	5(*)	12	29	1(*)	38
KENYA	(158)	570	585	576	566	558	583	---	564	6(*)	21	14	7(*)	11	0(*)	41
LIBERIA	(97)	552	565	554	557	527	563	---	548	4(*)	13(*)	9(*)	5(*)	20	0(*)	48
LIBYA	(644)	448	505	466	488	467	446	407	446	1(*)	2	3	5	1(*)	0(*)	89
MOROCCO	(129)	542	577	559	516	545	563	---	531	9(*)	9(*)	9(*)	13	12	0(*)	47
NIGERIA	(1485)	553	550	560	546	571	569	591	532	4	17	15	15	11	0(*)	38
RHODESIA	(77)	586	---	578	604	584	583	628	587	0(*)	26	16(*)	10(*)	5(*)	3(*)	40
SOUTH AFRICA	(95)	616	644	600	637	627	620	642	610	0(*)	23	6(*)	12(*)	9(*)	2(*)	39
SIERRA LEONE	(47)	556	625	564	568	595	602	---	508	9(*)	23(*)	13(*)	15(*)	6(*)	0(*)	36
SOMALIA	(46)	492	547	519	465	486	613	384	492	2(*)	4(*)	4(*)	24(*)	2(*)	2(*)	61
SUDAN	(468)	479	466	482	483	481	511	502	473	2(*)	12	17	12	6	2(*)	50
TANZANIA	(118)	561	548	553	573	559	561	---	546	3(*)	25	14	9(*)	18	0(*)	31
UGANDA	(48)	575	---	576	565	594	577	619	559	0(*)	20(*)	7(*)	16(*)	24(*)	4(*)	29(*)
ZAIRE	(67)	481	502	494	490	454	472	---	473	10(*)	16(*)	15(*)	6(*)	10(*)	0(*)	42
ZAMBIA	(81)	573	582	589	561	583	575	618	569	4(*)	26	9(*)	14(*)	2(*)	2(*)	43
OTHER	(316)	512	548	526	498	535	520	575	497	5	15	9	11	11	1(*)	49
AMERICA-TOTAL	(10849)	517	537	533	514	522	553	552	503	5	12	8	16	9	1	49
ARGENTINA	(395)	552	588	551	542	552	589	578	548	8	15	8	10	7	2(*)	42
BOLIVIA	(97)	505	493	562	548	471	547	---	496	4(*)	6(*)	7(*)	8(*)	7(*)	0(*)	67
BRAZIL	(1882)	515	547	518	499	521	551	548	505	6	13	7	17	7	2	48
CANADA	(251)	578	561	579	556	603	603	628	562	7	23	15	12	19	1(*)	23
CHILE	(561)	524	543	541	513	523	565	572	514	6	13	6	17	6	0(*)	51
COLOMBIA	(822)	511	494	526	511	511	542	497	504	6	11	9	12	11	1(*)	50
COSTA RICA	(264)	524	543	550	517	547	553	568	509	5(*)	9	11	10	9	3(*)	54
CUBA	(83)	573	571	591	562	549	628	---	549	11(*)	17(*)	11(*)	12(*)	14(*)	0(*)	35
DOMINICA	(115)	496	501	513	528	498	482	628	485	3(*)	13	10(*)	28	6(*)	1(*)	47
ECUADOR	(213)	502	515	522	470	527	527	418	496	6(*)	6(*)	7(*)	13	5(*)	0(*)	64
EL SALVADOR	(150)	512	523	519	503	503	556	---	505	4(*)	7(*)	8(*)	13	11	0(*)	57
GUATEMALA	(129)	532	558	548	497	537	576	---	526	2(*)	3(*)	7(*)	15	9(*)	0(*)	64
HAITI	(125)	498	549	519	485	496	534	512	477	6(*)	14	14	10(*)	12	2(*)	42
HONDURAS	(106)	505	516	509	488	491	561	---	496	4(*)	8(*)	12(*)	7(*)	13(*)	0(*)	56
MEXICO	(2513)	521	540	538	511	523	550	556	506	2	12	9	22	12	1	42
NETH. ANTILLES	(42)	552	562	591	500	615	587	657	534	5(*)	14(*)	2(*)	5(*)	5(*)	2(*)	67
NICARAGUA	(160)	497	501	516	513	488	556	---	488	3(*)	8(*)	6(*)	7(*)	9(*)	0(*)	67
PANAMA	(259)	504	552	510	532	499	549	548	495	3(*)	9	8	12	3(*)	1(*)	64
PARAGUAY	(72)	498	---	473	---	521	---	580	491	0(*)	10(*)	0(*)	23(*)	0(*)	5(*)	55(*)
PERU	(459)	518	517	526	508	479	553	578	506	5	7	5	15	10	2(*)	55
PUERTO RICO	(432)	548	555	547	543	548	538	567	523	8	30	16	11	9	2(*)	25
URUGUAY	(92)	558	564	574	519	587	614	---	537	5(*)	16	38	14(*)	4(*)	0(*)	29
USA	(65)	536	---	569	502	513	606	622	532	0(*)	6(*)	9(*)	23	6(*)	5(*)	51
VENEZUELA	(1568)	493	509	507	497	520	534	509	488	4	9	5	14	6	1(*)	62
OTHER	(44)	552	499	620	546	559	590	---	533	5(*)	14(*)	9(*)	5(*)	11(*)	0(*)	57

Table 5.2, CONTINUED

REGION AND COUNTRY	TOTAL (ALL FIELDS)		MEANS BY FIELD							PER CENTS BY FIELD***						
	N	MEAN	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**
ASIA-TOTAL	(69080)	518	531	533	536	544	567	541	502	3	7	4	16	8	0	61
AFGHANISTAN	(100)	474	561	485	488	471	462	546	456	5(*)	15	15	15	3(*)	1(*)	46
BANGLADESH	(567)	509	537	525	512	525	526	487	496	3	7	5	26	7	0(*)	53
BURMA	(71)	509	---	498	487	523	544	---	499	0(*)	3(*)	6(*)	39	3(*)	0(*)	49
CHINA (TAIWAN)	(25312)	514	537	536	542	537	546	549	505	2	4	3	12	4	0	74
HONG KONG	(5436)	505	523	540	550	538	546	550	493	2	6	2	6	6	0(*)	78
INDIA	(11734)	556	571	577	546	564	575	554	534	2	5	9	39	14	0	30
INDONESIA	(1748)	477	486	478	483	483	520	502	473	2	11	8	18	2	1(*)	66
JAPAN	(6233)	584	514	513	490	506	535	530	496	0	11	2	[illegible]	9	1	68
KOREA	(5111)	513	515	531	510	523	542	557	503	6	12	4	14	0	0	55
MACAO	(166)	495	471	565	523	552	551	---	486	2(*)	5(*)	2(*)	4(*)	2(*)	0(*)	83
MALAYSIA	(1710)	559	564	573	587	579	596	663	541	4	17	7	8	11	0(*)	53
NEPAL	(156)	522	551	534	480	557	539	---	514	3(*)	12	3(*)	10	6(*)	0(*)	67
PAKISTAN	(1964)	524	534	532	520	535	542	538	510	2	5	6	27	9	1	50
PHILIPPINES	(1575)	594	600	606	577	599	616	613	579	4	14	12	14	21	1	34
SINGAPORE	(428)	567	578	601	583	569	628	643	540	3(*)	10	1(*)	8	21	0(*)	56
SRI LANKA	(431)	555	560	531	563	561	601	610	549	3(*)	8	10	34	4	0(*)	41
THAILAND	(6635)	472	508	479	488	495	490	503	465	3	10	3	7	8	1	69
VIETNAM	(486)	583	519	538	505	499	548	544	496	3(*)	4	8	29	8	2(*)	56
OTHER	(97)	520	553	554	537	553	571	522	490	5(*)	10(*)	5(*)	9(*)	14(*)	2(*)	54
EUROPE-TOTAL	(9481)	553	571	569	554	550	580	585	539	6	10	4	19	12	3	47
AUSTRIA	(100)	583	568	618	623	603	609	531	575	4(*)	8(*)	2(*)	7(*)	11(*)	4(*)	64
BELGIUM	(401)	585	609	592	580	591	589	603	574	7	9	3(*)	12	28	5	43
CYPRUS	(274)	499	579	513	531	522	554	370	488	1(*)	8	2(*)	11	5(*)	0(*)	72
DENMARK	(118)	594	614	605	595	580	577	612	598	7(*)	14	3(*)	9(*)	23	2(*)	42
FINLAND	(132)	582	583	603	562	553	578	518	586	3(*)	10(*)	7(*)	3(*)	11	2(*)	64
FRANCE	(1653)	578	572	571	552	571	584	569	562	7	8	3	26	19	4	33
GERMANY	(939)	583	587	606	578	575	588	590	576	11	12	6	14	7	6	42
GREAT BRITAIN	(29)	540	520	---	584	544	623	---	512	3(*)	0(*)	14(*)	21(*)	10(*)	0(*)	52
GREECE	(1509)	514	541	521	525	528	550	558	504	3	8	4	14	5	0(*)	64
ITALY	(581)	552	548	553	532	542	574	605	551	9	9	4	14	10	2(*)	50
NETHERLANDS	(416)	601	612	611	605	604	607	611	590	6	16	6	8	18	8	38
NORWAY	(398)	576	592	581	580	569	582	605	569	6	11	4	13	26	2(*)	38
POLAND	(149)	535	554	541	572	528	603	560	520	14	10	4(*)	28	4(*)	3(*)	38
PORTUGAL	(122)	557	523	572	532	535	583	583	544	4(*)	5(*)	9(*)	13	7(*)	1(*)	61
ROMANIA	(77)	559	531	577	524	564	628	---	548	8(*)	5(*)	4(*)	32	9(*)	0(*)	42
SPAIN	(377)	549	549	558	547	523	565	566	551	7	13	4(*)	12	11	1(*)	53
SWEDEN	(251)	594	587	602	589	607	605	597	585	4(*)	11	6(*)	11	21	2(*)	48
SWITZERLAND	(316)	576	598	595	579	558	593	587	562	8	10	7	13	15	10	37
TURKEY	(1134)	510	531	537	513	521	539	465	492	3	7	2	31	10	0(*)	47
USSR	(75)	526	554	517	503	525	503	---	509	11(*)	9(*)	8(*)	31	9(*)	0(*)	32
YUGOSLAVIA	(177)	525	565	559	459	513	645	510	525	7(*)	10	6(*)	29	2(*)	2(*)	44
OTHER	(253)	564	584	576	572	577	588	618	548	5(*)	15	6	23	7	4(*)	41

TABLE 5.2, CONCLUDED

REGION AND COUNTRY	TOTAL (ALL FIELDS)		MEANS BY FIELD							PER CENTS BY FIELD***						
	N	MEAN	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**	ARTS &HUM	SOC SCI	BIO SCI	PHY SCI	BUS.	LAW	OTH-ER**
MIDEAST-TOTAL	(19177)	445	507	498	480	492	519	533	453	2	6	3	11	4	0	74
ARAB EMIRATES	(28)	447	---	491	---	466	---	---	431	0(*)	18(*)	0(*)	14(*)	0(*)	0(*)	68
BAHRAIN	(67)	474	---	482	444	518	533	---	471	0(*)	7(*)	6(*)	9(*)	1(*)	0(*)	76
IRAN	(12146)	486	488	487	466	482	493	499	449	1	5	3	10	3	0(*)	78
IRAQ	(641)	454	486	468	441	468	503	---	448	4	6	13	17	2	0(*)	59
ISRAEL	(1321)	543	555	563	529	553	560	577	525	4	17	4	21	10	1(*)	41
JORDAN	(1659)	466	522	499	501	470	504	---	458	3	5	4	8	2	0(*)	77
KUWAIT	(377)	448	539	454	478	458	495	---	441	3(*)	5	3(*)	7	2(*)	0(*)	80
LEBANON	(1017)	501	523	560	567	517	578	530	485	1(*)	3	4	12	7	1(*)	72
OMAN	(6)	482	---	---	---	529	---	---	458	0(*)	0(*)	0(*)	33(*)	0(*)	0(*)	67(*)
QATAR	(13)	422	---	---	---	415	---	---	424	0(*)	0(*)	0(*)	15(*)	0(*)	0(*)	85(*)
SAUDI ARABIA	(1585)	443	490	440	486	487	527	---	432	3	9	2	9	3	0(*)	75
SYRIA	(2421)	491	517	425	507	481	543	563	486	7	2(*)	16	11	2(*)	0(*)	62
YEMEN	(75)	454	448	446	478	477	---	403	482	3(*)	4(*)	5(*)	4(*)	0(*)	1(*)	83
OTHER	(8)	---	---	---	---	---	---	---	---	0(*)	0(*)	0(*)	0(*)	0(*)	0(*)	0(*)
PACIFIC-TOTAL	(623)	443	481	462	491	486	479	---	438	2(*)	5	4	2(*)	2(*)	0(*)	85
AMERICAN SAMOA	(247)	442	393	443	488	---	450	---	441	0(*)	1(*)	1(*)	0(*)	0(*)	0(*)	97
AUSTRALIA	(19)	505	---	---	632	515	597	---	478	0(*)	0(*)	11(*)	11(*)	5(*)	0(*)	74(*)
CAROLINE ISLS.	(186)	433	447	476	449	---	423	---	428	2(*)	7(*)	5(*)	0(*)	2(*)	0(*)	85
FIJI ISLANDS	(18)	511	---	488	516	530	570	---	485	0(*)	6(*)	17(*)	22(*)	6(*)	0(*)	50(*)
MARIANA ISLS.	(19)	498	---	---	430	---	577	---	489	0(*)	0(*)	5(*)	0(*)	5(*)	0(*)	89
MARSHALL ISLS.	(52)	397	368	392	442	---	428	---	397	2(*)	13(*)	4(*)	0(*)	2(*)	0(*)	79
TAHITI	(10)	479	367	495	503	---	512	---	477	10(*)	20(*)	10(*)	0(*)	20(*)	0(*)	40(*)
TONGA	(21)	440	455	383	523	428	455	---	436	10(*)	5(*)	5(*)	10(*)	10(*)	0(*)	62(*)
WEST SAMOA	(44)	448	518	446	429	437	413	---	443	9(*)	9(*)	5(*)	5(*)	2(*)	0(*)	70
OTHER	(7)	573	---	618	628	483	---	---	529	0(*)	29(*)	29(*)	14(*)	0(*)	0(*)	29(*)
ALL CONTINENTS	(116146)	511	536	533	526	536	556	558	494	3	8	5	15	6	1	60

*GRADUATE DEGREE SEEKERS ONLY; EXCLUDES ALL CANDIDATES REPORTING OTHER REASONS FOR TAKING TOEFL.
**PREDOMINANTLY NO RESPONSE; ALSO INCLUDES FIELD NOT LISTED.
***PER CENTS BASED ON N'S LESS THAN 15 ARE FOLLOWED BY "(*)". WHEN THERE ARE NO CASES "---" REPLACES THE MEAN.

SECTION 6. MOST FREQUENTLY REPORTED NATIVE LANGUAGES OF POSTSECONDARY-DEGREE-PLANNING TOEFL CANDIDATES, BY NATIVE COUNTRY

In completing TOEFL forms, candidates are asked to identify their "native language" by referring to a comprehensive list of languages provided in the TOEFL Handbook and selecting the appropriate language (see Exhibit 6A).* More than 120 different languages are listed. As noted in Section 2, postsecondary-degree-planning candidates in the respective native country groups differ substantially in degree of homogeneity/heterogeneity with respect to reported native languages, as reflected in two indices:

- Dominant Language Index (DLI)--the percentage of all candidates reporting the most frequently reported language (a measure of linguistic homogeneity).
- Index of Linguistic Fractionalization (ILF)--an estimate of the probability that two candidates selected at random from a given native country contingent will not report the same language (a measure of linguistic heterogeneity).**

Table 6.1 shows the dominant (most prevalent) and second most frequently reported languages for candidate contingents from 25 leading countries of origin of degree-planning TOEFL candidates, and the associated ILF. In the table, country contingents with the same dominant language are grouped; each country is identified by TOEFL region. The TOEFL score statistics shown for each country group are based on data for all degree planners, without regard to language or level of planned degree program, not just data for those reporting the designated languages. Several features of the data in Table 6.1 are noteworthy:

- It is apparent that ILF values increase as the DLI values decrease.
- For 16 of the 25 leading countries, 90 percent or more of all degree planners were members of the dominant language group; in 21 contingents 80 percent or more of the candidates reported the dominant language.

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*Although the list is comprehensive, it is not exhaustive, and provision is made for candidates to indicate that their native language is not one of those listed.

**It is important to recognize that "native" is not explicitly defined in instructions given to TOEFL candidates. An individual's native language (e.g., language of the parental family) is not necessarily the current primary language, and individuals may, for instance, report "native" languages that are not indigenous to the reported native country, etc.

Exhibit 6A

List of Native Languages and Corresponding Codes, and Instructions to TOEFL Candidates: From the TOEFL Handbook for Applicants, 1979-80

9. **Native Language Code:** Look for your native language in List D on page 13. Then, on your registration confirmation ticket, copy the code number that is next to your native language. Remember, there are many languages spoken in the world, not all of them are included in List D. The languages in the list are arranged by geographic area. If you do not find your language under one geographic area, check the list carefully to see if it is under another. If your language is not in the list at all, enter 000 in the boxes under "Native Language Code." After you have finished this section, your registration confirmation ticket should be completely and properly filled out. Keep your ticket in a safe place, since you must take it to the test center on the day of the test.

LIST D: Native Language Codes

AFRICA
101 Afrikaans
104 Akan
107 Amharic
510 Arabic
110 Bambara
111 Bemba
113 Berber
114 Chichewa
116 Ehk
422 English
119 Ewe
434 French
122 Fulani
125 Ga
127 Galla
133 Hausa
136 Ibo
139 Kikongo
142 Kikuyu
176 Kiswahili
145 Lingala
148 Luba-Lulua
151 Luganda
153 Luo
156 Malagasy
159 Malinke (Mandingo)
162 Mende
461 Portuguese
164 Sangho
165 Sepedi
166 Sesotho
167 Setswana
169 Siswati
170 Shona
173 Somali
179 Tigrinya
182 Twi-Fante
185 Wolof
188 Yoruba
191 Zulu

AMERICAS
203 Aymara
418 Dutch
422 English
434 French
201 Guarani
461 Portuguese
205 Quechua
478 Spanish

ASIA
301 Assamese
304 Baluchi
305 Bengali
306 Bihari
307 Burmese
310 Cambodian (Khmer)
312 Cebuano
315 Chinese
422 English
434 French
320 Gujarati
323 Hindi
326 Ilocano
328 Indonesian
331 Japanese
332 Javanese
335 Kannada (Kanarese)
338 Kashmiri
339 Kazakh
341 Khalkha Mongolian
340 Korean
342 Kurdish
343 Lao
345 Malay
346 Malayalam
348 Marathi
351 Nepali
353 Oriya
355 Punjabi
357 Pushtu
358 Rajasthani
360 Sindhi
361 Sinhalese
364 Sundanese
367 Tagalog
370 Tamil
371 Tatar
373 Telugu
376 Thai
379 Tibetan
382 Tulu
384 Uighur
385 Urdu
388 Vietnamese
391 Visayan
393 Yi
396 Zhuang

EUROPE
401 Armenian
404 Basque (Euskara)
407 Bulgarian
410 Catalan
413 Czech
416 Danish
418 Dutch
422 English
425 Estonian
428 Finnish
431 Flemish
434 French
438 Georgian
437 German
440 Greek
443 Hungarian
447 Icelandic
450 Italian
452 Latvian
453 Lithuanian
454 Macedonian
455 Maltese
456 Norwegian
459 Polish
461 Portuguese
464 Romanian
467 Russian
470 Serbo-Croatian
473 Slovak
475 Slovene
478 Spanish
481 Swedish
484 Turkish
487 Ukrainian

MIDDLE EAST
501 Arabic
401 Armenian
422 English
434 French
504 Farsi
507 Hebrew

PACIFIC REGION
422 English
601 Fijian
434 French
604 Kusaiean
607 Marshallese
610 Palauan
613 Ponapean
616 Samoan
619 Tahitian
622 Tongan
625 Trukese
628 Ulithian
631 Yapese

TABLE 6.1

COUNTRIES GROUPED BY NATIVE LANGUAGE WHICH WAS MOST FREQUENTLY REPORTED BY TOEFL CANDIDATES, THE INCIDENCE OF THAT LANGUAGE AND THE LANGUAGE SECOND MOST FREQUENTLY REPORTED, AND NUMBER AND TOEFL SCORE MEANS AND STANDARD DEVIATIONS OF ALL CANDIDATES, WITHOUT REGARD TO LANGUAGE, FOR SELECTED COUNTRIES: DEGREE-SEEKING TEST-TAKING CANDIDATES ONLY

1977-78 & 1978-79

MOST PREVALENT LANGUAGE	%	SECOND MOST PREVALENT LANGUAGE	%	INDEX OF LINGUISTIC FRACTIONALIZATION*	COUNTRY	REGION	TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE							
								LISTEN		WRITE		READ	TOTAL	
							N	M	SD	M	SD	M	M	SD
SPANISH	99	UNKNOWN**	1	0.03	MEXICO	AMERICA	(3464)	54	8	49	8	54	522	68
SPANISH	98	UNKNOWN**	1	0.04	VENEZUELA	AMERICA	(3934)	52	8	46	8	50	490	68
SPANISH	98	UNKNOWN**	1	0.04	COLOMBIA	AMERICA	(1830)	54	8	49	9	52	515	72
ARABIC	97	UNKNOWN**	2	0.06	SAUDI ARABIA	MID EAST	(3631)	48	7	42	8	41	436	66
ARABIC	95	ARMENIAN	2	0.10	LEBANON	MID EAST	(4323)	52	7	48	8	47	491	72
ARABIC	94	UNKNOWN**	5	0.12	JORDAN	MID EAST	(5183)	50	7	44	8	44	459	69
CHINESE	99	UNKNOWN**	1	0.02	CHINA (TAIWAN)	ASIA	(30731)	51	6	50	6	52	509	53
CHINESE	99	UNKNOWN**	1	0.03	HONG KONG	ASIA	(21395)	52	7	50	7	52	515	60
CHINESE	73	ENGLISH	19	0.43	SINGAPORE	ASIA	(1836)	58	7	55	8	57	568	68
GREEK	98	UNKNOWN**	1	0.03	GREECE	EUROPE	(3200)	54	7	50	8	50	510	72
THAI	98	UNKNOWN**	1	0.04	THAILAND	ASIA	(8176)	49	7	46	7	47	471	62
JAPANESE	97	UNKNOWN**	2	0.06	JAPAN	ASIA	(12338)	50	7	48	8	49	488	68
KOREAN	97	JAPANESE	2	0.06	KOREA	ASIA	(7475)	50	7	50	8	53	507	61
PORTUGUESE	97	UNKNOWN**	2	0.06	BRAZIL	AMERICA	(2481)	53	8	49	9	53	516	72
FRENCH	96	UNKNOWN**	1	0.07	FRANCE	EUROPE	(2194)	56	6	55	6	58	565	52
TURKISH	96	ARMENIAN	1	0.07	TURKEY	EUROPE	(1937)	53	7	49	8	50	505	71
HEBREW	87	ARABIC	10	0.24	ISRAEL	MID EAST	(2352)	56	8	51	8	50	528	76
INDONESIAN	87	JAVANESE	3	0.24	INDONESIA	ASIA	(3508)	50	7	47	7	48	484	64
TAGALOG	75	CEBUANO	7	0.43	PHILIPPINES	ASIA	(2662)	59	6	57	7	59	580	61
URDU	81	@@		0.33	PAKISTAN	ASIA	(3833)	53	8	51	9	53	521	77
FARSI	96	@@		0.07	IRAN	MID EAST	(34421)	50	8	45	8	46	461	68
MALAY	52	CHINESE	38	0.58	MALAYSIA	ASIA	(7154)	57	6	54	7	56	555	58
IBO	48	UNKNOWN**	16	0.71	NIGERIA	AFRICA	(13557)	48	7	53	6	53	511	53
AKAN	45	GA	19	0.72	GHANA	AFRICA	(2193)	54	7	58	6	57	561	53
HINDI	21	GUJARATI	18	0.88	INDIA	ASIA	(13704)	54	8	55	8	57	553	7:

*AN ESTIMATE OF THE PROBABILITY THAT TWO RANDOMLY SELECTED CANDIDATES FROM A COUNTRY WILL NOT NOT REPORT THE SAME LANGUAGE AS A NATIVE LANGUAGE (AFTER HUDSON, TAYLOR ET AL., 1972).

**"UNKNOWN" IN THIS COLUMN INDICATES THAT AN UNLISTED NATIVE LANGUAGE (OR NONRESPONSE TO THE LANGUAGE QUESTION) ACCOUNTED FOR A HIGHER PERCENTAGE OF CANDIDATES THAN ANY LISTED LANGUAGE OTHER THAN THAT MOST FREQUENTLY REPORTED.

@@NO SECOND LANGUAGE IS INDICATED AND THE ILF IS ESTIMATED DUE TO MISCODING OF REPORTED LANGUAGE. THESE COUNTRIES ARE OUT OF ORDER.

- Three languages (Spanish, Arabic, and Chinese) were dominant for three countries each; each of the remaining 16 native country groups was characterized by a different dominant language.

- In several instances, "Unknown" is listed as the second most prevalent language. This means that either the "language not listed" code or nonresponse to the language question accounted for a higher percentage of candidates than any listed language code, other than that for the dominant language.*

It may be seen in the table that, of the leading 25 countries, those highest on the ILF (and lowest on the DLI) were from the Asian and African regions (India, Ghana, Nigeria, Asia, Iran, and the Philippines).

- Data previously reported (see Section 2, Tables 2.1 and 2.2) indicate that linguistic diversity is more characteristic of candidates from African and Asian countries than of candidates from other TOEFL regions.**

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*In evaluating the percentages for "unknown" it must be remembered that this designation appears in TOEFL files not only for candidates who responded to the language question by indicating that their native language was not included in the list provided (see Exhibit 5A), but also for candidates who simply failed to respond to the question on native language.

Some nominal rate of nonresponse to background questions is expected. However, for a number of countries (see Table 6.2), the "unknown" category accounted for 10 percent or more of the candidates or for more candidates than <u>any</u> designated language. These do not seem to be "nominal" rates of nonresponse.

It may be determined from Table 6.2 that the great majority of these candidate contingents were from countries in the African region. These countries tend to rank high on an Index of Ethnic and Linguistic Fractionalization in national populations (Taylor & Hudson, 1972), and the candidate groups are also high on the comparable Index of Linguistic Fractionalization based on candidate data. Thus, it seems reasonable that languages <u>other than those listed</u> may be involved for perhaps a significant proportion of candidates in these particular countries--i.e., those identified as having the highest percentages of "unknown" native languages.

**The ILF measure based solely on language for TOEFL candidates from different countries is relatively strongly associated across countries ($r = .64$) with a similar Index of Ethnic and Linguistic Fractionalization based on patterns of ethno-linguistic mix in the populations of the respective countries (see Section 7, Table 7.4).

- Considering only the 25 leading countries of origin, median DLI and ILF values were, respectively, 96 percent and .07; for all native country groups with 10 or more candidates, median values for these two indices, respectively, were .84 and 0.21. Thus the typical leading country contingent is more homogeneous linguistically than the typical country contingent generally.

In evaluating the TOEFL score means it is important to keep in mind (a) that contingents from the respective countries differ markedly with respect to composition on variables that are related to performance on TOEFL (e.g., level of degree planned, sex ratio, percent tested in the U.S.A. or Canada); (b) that there is considerable variability in means among country contingents with the same dominant language; and (c) that TOEFL files contain no information about the amount, quality, or recency of ESL training and/or nonacademic English language experience among the candidate contingents from the respective countries. In light of these limitations, it is of interest to note patterns of differences between Listening Comprehension and Reading Comprehension means (see Section 3).

- Listening means are five or more points higher than Reading means for candidates from Iran, Israel, Saudi Arabia, Lebanon, and Jordan; however, Reading means are three or more points higher than Listening means for candidates from India, Ghana, Nigeria, and Korea.

- Such findings raise questions, of course, regarding the relative ease of development, for given language groups regardless of country, of skills involved in understanding spoken as opposed to written English passages. However, it is relevant to note that of the five country contingents with greatest Listening-over-Reading superiority, three (Iran, Saudi Arabia, and Lebanon) are characterized by a much higher than average percentage of candidates who were residing in the United States or Canada when they took TOEFL, while three of the four with greatest Reading-over-Listening superiority (India, Ghana, and Nigeria) had below average percentages of such candidates (see Section 2, Table 2.1).

Clearly, differences in performance on TOEFL among contingents from different countries may be due to several variables, including differences in "linguistic distance" between English and various languages and corresponding differences in inherent difficulty in learning the English language for members of different non-English language groups.*

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*Of course, it is important to keep in mind that differences in difficulty of learning the English language for various language groups cannot be inferred from observed differences in TOEFL scores.

Dominant Language Data for All Native Country Groups

Table 6.2 presents data, comparable to those provided in Table 6.1 for the leading 25 countries of origin, on dominant languages for native country contingents with 15 or more degree-seeking candidates. Within each dominant language group, countries are listed in descending order with respect to the DLI (i.e., percent reporting the most prevalent language).

- Spanish was the dominant language for candidate contingents from 21 countries, 20 from the Americas and one (Spain) from Europe; Arabic was dominant for 17 contingents, Arabic and French were dominant for 12. Arabic-dominant contingents typically were more homogeneous linguistically than the French-dominant contingents. Only two French-dominant contingents were very high in linguistic homogeneity (DLI values of 97 and 96 for Haiti and France, respectively) whereas in 14 of the 17 Arabic-dominant candidate groups 89 percent or more reported Arabic as the native language.

- English was the most frequently reported native language of eight relatively small contingents from countries in the TOEFL American, European, African, and Pacific regions (but was not the majority language in half of these). If it is recalled that the mean TOEFL total score for all degree planners without regard to level was 505, it is pertinent to note that total means for most of these groups were well above the average. This tends to validate the self-classification but, of course, leaves unanswered questions regarding the backgrounds of native speakers of English who nonetheless take TOEFL.

- Chinese was the dominant language for six Asian contingents, including the very large contingents from Taiwan and Hong Kong and a large group from Singapore. It is noteworthy that 19 percent of candidates from Singapore reported English as the native language and that TOEFL means for this group were substantially higher than those for other Chinese-dominant groups as well as for TOEFL candidates generally.

- Portuguese was dominant for five country groups, including a large Brazilian and a considerably smaller Portuguese contingent.

- Farsi was the dominant language for one very large contingent (Iran) and one small contingent (Afghanistan).

- Dutch and German were the most prevalent languages for three contingents each.

- Each of three additional languages--Greek, Japanese, and Samoan--was dominant for a relatively large contingent from one country and a small contingent from a second.

TABLE 6.2

COUNTRIES GROUPED BY NATIVE LANGUAGE WHICH WAS MOST FREQUENTLY REPORTED BY TOEFL CANDIDATE CONTINGENT, THE INCIDENCE OF THAT LANGUAGE AND THE LANGUAGE SECOND MOST FREQUENTLY REPORTED, AND NUMBER AND TOEFL SCORE MEANS AND STANDARD DEVIATIONS OF ALL CANDIDATES, WITHOUT REGARD TO LANGUAGE, BY COUNTRY: DEGREE-SEEKING TEST-TAKING CANDIDATES ONLY

1977-78 & 1978-79

MOST PREVALENT LANGUAGE	%	SECOND MOST PREVALENT LANGUAGE	%	INDEX OF LINGUISTIC FRACTIONALIZATION*	COUNTRY	REGION	TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE*						
								LISTEN		WRITE		READ	TOTAL
							N	M SD		M SD		M SD	M SD
SPANISH	100		0	0.0	DOMINICA	AMERICA	(226)	56..8		48..9		52..8	512..76
SPANISH	100	ENGLISH	0	0.01	EL SALVAD	AMERICA	(570)	55..7		49..9		52..7	519..70
SPANISH	99	ARABIC	0	0.01	GUATEMAL	AMERICA	(290)	56..7		50..9		54..7	532..66
SPANISH	99	UNKNOWN**	1	0.02	ECUADOR	AMERICA	(958)	53..8		47..8		51..7	504..70
SPANISH	99	UNKNOWN**	1	0.03	CHILE	AMERICA	(831)	56..8		48..8		54..7	521..70
SPANISH	99	UNKNOWN**	1	0.03	COSTA RI	AMERICA	(402)	55..8		48..9		53..7	523..75
SPANISH	99	CHINESE	1	0.03	HONDURAS	AMERICA	(309)	55..8		49..9		52..7	520..75
SPANISH	99	UNKNOWN**	1	0.03	MEXICO	AMERICA	(3464)	54..8		47..8		54..7	522..68
SPANISH	98	UNKNOWN**	1	0.03	PERU	AMERICA	(1072)	54..8		49..9		53..8	517..76
SPANISH	98	UNKNOWN**	1	0.03	CUBA	AMERICA	(169)	54..7		53..9		56..7	560..69
SPANISH	98	UNKNOWN**	1	0.04	PUERTO R	AMERICA	(777)	56..8		50..9		55..8	534..75
SPANISH	98	UNKNOWN**	1	0.04	VENEZUEL	AMERICA	(3934)	52..8		46..8		50..7	490..68
SPANISH	98	UNKNOWN**	1	0.04	COLOMBIA	AMERICA	(1830)	54..8		48..9		52..7	515..72
SPANISH	98	UNKNOWN**	2	0.04	NICARAGU	AMERICA	(594)	54..7		47..8		51..7	500..64
SPANISH	98	UNKNOWN**	1	0.05	ARGENTIN	AMERICA	(506)	54..7		53..8		57..6	552..65
SPANISH	98	UNKNOWN**	1	0.05	PANAMA	AMERICA	(725)	55..8		48..9		52..7	513..73
SPANISH	97	UNKNOWN**	2	0.06	BOLIVIA	AMERICA	(413)	54..7		48..8		52..7	510..70
SPANISH	95	FRENCH	1	0.10	URUGUAY	AMERICA	(140)	56..8		53..9		57..7	552..71
SPANISH	90	CHINESE	6	0.18	PARAGUAY	AMERICA	(52)	53..8		48..8		52..7	512..69
SPANISH	87	CATALAN	9	0.23	SPAIN	EUROPE	(510)	56..7		52..8		57..6	567..61
SPANISH	34	ENGLISH	21	0.82	USA	AMERICA	(201)	59..7		55..9		55..8	569..76
ARABIC	97	UNKNOWN**	2	0.06	SAUDI AR	MID EAST	(3631)	48..7		42..8		41..7	436..66
ARABIC	95	UNKNOWN**	4	0.10	KUWAIT	MID EAST	(1120)	49..8		42..8		42..7	441..65
ARABIC	95	ARMENIAN	2	0.10	LEBANON	MID EAST	(432)	52..7		48..8		47..8	491..72
ARABIC	95	UNKNOWN**	3	0.10	LIBYA	AFRICA	(141)	48..6		41..7		41..7	431..55
ARABIC	94	UNKNOWN**	4	0.11	SUDAN	AFRICA	(570)	46..7		38..7		39..7	375..58
ARABIC	94	UNKNOWN**	5	0.12	JORDAN	MID EAST	(518)	50..7		44..8		44..8	459..69
ARABIC	93	UNKNOWN**	4	0.13	ARAB EMI	MID EAST	(135)	51..7		43..7		42..7	453..59
ARABIC	93	ARMENIAN	4	0.13	SYRIA	MID EAST	(645)	52..7		47..8		46..8	481..72
ARABIC	93	AMHARIC	3	0.13	YEMEN	MID EAST	(190)	50..7		45..8		45..8	464..71
ARABIC	93	AMHARIC	3	0.14	QATAR	MID EAST	(138)	49..7		41..7		40..6	433..60
ARABIC	92	JAPANESE	2	0.15	BAHRAIN	MID EAST	(224)	52..8		46..9		46..9	472..79
ARABIC	92	UNKNOWN**	3	0.16	OMAN	MID EAST	(60)	51..7		45..9		44..8	466..58
ARABIC	91	AMHARIC	6	0.17	EGYPT	AFRICA	(1676)	49..8		47..9		47..8	478..78
ARABIC	89	UNKNOWN**	9	0.20	IRAQ	MID EAST	(1009)	49..8		46..8		46..8	459..73
ARABIC	78	FRENCH	21	0.46	TUNISIA	AFRICA	(81)	49..7		43..8		41..8	447..68
ARABIC	57	FRENCH	23	0.60	ALGERIA	AFRICA	(437)	51..7		50..7		50..8	502..65
ARABIC	50	FRENCH	33	0.63	MOROCCO	AFRICA	(191)	54..7		53..8		54..8	533..69
FRENCH	97	UNKNOWN**	2	0.05	HAITI	AMERICA	(310)	51..9		48..9		50..8	495..72
FRENCH	96	UNKNOWN**	1	0.07	FRANCE	EUROPE	(2194)	56..6		55..6		58..5	565..52

MOST PREVALENT LANGUAGE	%	SECOND MOST PREVALENT LANGUAGE	%	INDEX OF LINGUISTIC FRACTIONALIZATION
FRENCH	81	TAHITIAN	12	0.33
FRENCH	75	ENGLISH	8	0.43
FRENCH	70	SPANISH	30	0.42
FRENCH	55	DUTCH	17	0.63
FRENCH	52	AKAN	27	0.64
FRENCH	32	SWAHILI	15	0.82
FRENCH	31			0.65
FRENCH	26			0.65
FRENCH	22			0.78
FRENCH	16			0.67
ENGLISH	100		0	0.0
ENGLISH	95	CHINESE	3	0.10
ENGLISH	92	CHINESE	4	0.15
ENGLISH	69	UNKNOWN	37	0.62
ENGLISH	57	CHINESE	23	0.79
ENGLISH	30	AFRIKAAN	19	0.82
ENGLISH	2			0.20
ENGLISH	2			0.14
CHINESE	99	UNKNOWN	1	0.02
CHINESE	99	UNKNOWN	1	0.03
CHINESE	84	MALAY	9	0.28
CHINESE	73	ENGLISH	19	0.43
CHINESE	71	MALAY	19	0.46
CHINESE	38	UNKNOWN	25	0.77
PORTUGUESE	100		0	0.0
PORTUGUESE	97	UNKNOWN	2	0.06
PORTUGUESE	91	CHINESE	6	0.17
PORTUGUESE	87	UNKNOWN	13	0.23
PORTUGUESE	74	UNKNOWN	26	0.39
DUTCH	96	UNKNOWN	1	0.07
DUTCH	94	UNKNOWN	4	0.11
DUTCH	79	UNKNOWN	16	0.35
GERMAN	97	UNKNOWN	1	0.06
GERMAN	91	GREEK	3	0.16
GERMAN	66	FRENCH	26	0.49
FARSI	96			0.07
FARSI	64	PUSHTU	27	0.69
GREEK	98	UNKNOWN	1	0.03
GREEK	91	TURKISH	6	0.17
JAPANESE	97	UNKNOWN	2	0.06
JAPANESE	70	UNKNOWN	8	0.50
SAMOAN	99	UNKNOWN	1	0.02
SAMOAN	90	UNKNOWN	6	0.19

TABLE 6.2.

TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE

COUNTRY	REGION		LISTEN N	LISTEN M	LISTEN SD	WRITE M	WRITE SD	READ M	READ SD	TOTAL M	TOTAL SD
TAHITI	PACIFIC	(	61)	52	7	49	6	50	6	500	55
CANADA	AMERICA	(	4441)	59	6	56	8	58	7	570	65
MARTINIQ	AMERICA	(	101)	56	7	52	7	52	6	530	63
BELGIUM	EUROPE	(	514)	59	6	56	7	59	5	579	52
IVORY CO	AFRICA	(	195)	48	7	48	8	49	6	485	60
ZAIRE	AFRICA	(	142)	45	9	46	9	47	8	461	76
MAURITIU	ASIA	(	48)	57	6	57	6	58	6	571	58
LUXEMBOU	EUROPE	(	23)	61	4	59	5	60	6	600	32
UP VOLTA	AFRICA	(	23)	46	6	48	6	49	6	479	47
CAMEROON	AFRICA	(	336)	51	7	49	7	53	6	529	60
JAMAICA	AMERICA	(	25)	60	5	55	7	56	7	567	52
GUYANA	AMERICA	(	40)	59	5	58	7	58	7	583	55
TRINIDAD	AMERICA	(	26)	62	5	58	7	58	8	591	58
LIBERIA	AFRICA	(	260)	53	7	52	8	51	7	523	65
GR BRITA	EUROPE	(	96)	57	9	55	9	55	9	556	83
S AFRICA	AFRICA	(	168)	59	7	59	7	60	7	596	63
MALAWI	AFRICA	(	48)	57	7	57	7	57	6	571	58
MARIANA	PACIFIC	(	160)	56	6	56	8	57	7	557	61
CHINA(Taiwan)	ASIA	(	30731)	51	6	50	6	52	6	509	53
HONGKONG	ASIA	(	21395)	52	7	50	7	52	7	515	60
MACAO	ASIA	(	405)	50	7	51	7	51	7	507	61
SINGAPOR	ASIA	(	18361)	58	7	55	8	57	7	569	68
BRUNEI	ASIA	(	65)	56	6	51	7	52	7	531	57
BHUTAN	ASIA	(	16)	50	8	50	10	52	8	509	81
AZORES	EUROPE	(	23)	57	7	50	9	51	6	525	69
BRAZIL	AMERICA	(	2481)	53	8	49	9	53	7	516	72
PORTUGAL	EUROPE	(	253)	57	7	52	8	54	7	562	66
CP VERDE	AFRICA	(	15)	52	7	49	8	53	8	461	71
ANGOLA	AFRICA	(	19)	49	9	46	9	48	9	474	81
NETHERLS	EUROPE	(	846)	62	3	58	6	59	5	596	41
SURINAM	AMERICA	(	70)	57	6	53	6	53	6	562	56
NETH ANT	AMERICA	(	208)	61	5	54	7	55	6	562	52
GERMANY	EUROPE	(	1672)	60	5	57	6	58	5	581	60
AUSTRIA	EUROPE	(	150)	60	5	57	6	58	6	582	51
SWITZERL	EUROPE	(	523)	59	5	56	7	57	6	574	51
IRAN	MID EAST	(	34421)	50	8	45	8	46	8	461	68
AFGHANIS	ASIA	(	169)	51	8	43	9	45	8	470	73
GREECE	EUROPE	(	3200)	54	7	50	8	50	8	510	72
CYPRUS	EUROPE	(	923)	53	8	48	9	48	8	497	75
JAPAN	ASIA	(	12338)	50	7	48	8	49	8	488	68
AUSTRALI	PACIFIC	(	66)	52	8	46	9	46	9	478	82
W SAMOA	PACIFIC	(	115)	51	7	45	8	45	8	470	68
AM SAMOA	PACIFIC	(	663)	50	8	42	9	41	8	444	73

TABLE 6.2,

MOST PREVALENT LANGUAGE	%	SECOND MOST PREVALENT LANGUAGE	%	INDEX OF LINGUISTIC FRACTIONALIZATION*	COUNTRY	REGION	TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE#							
								LISTEN		WRITE		READ		TOTAL
							N	M	SD	M	SD	M	SD	M SD
NEPALI#	99			0.01	NEPAL	ASIA	1861	50	8	52	8	56	7	523 65
THAI	98	UNKNOWN**	1	0.04	THAILAND	ASIA	81761	99	7	96	7	97	7	571 62
TONGAN	98	SAMOAN	1	0.04	TONGA	PACIFIC	901	68	5	93	6	93	5	997 98
HUNGARIAN	97	CHINESE	1	0.07	HUNGARY	EUROPE	591	58	7	56	9	56	8	559 71
ITALIAN	97	UNKNOWN**	1	0.06	ITALY	EUROPE	10461	55	7	56	7	57	6	553 61
KOREAN	97	JAPANESE	2	0.06	KOREA	ASIA	76751	50	7	50	8	53	7	507 61
DANISH	96	CHINESE	1	0.07	DENMARK	EUROPE	1941	61	9	58	6	58	6	588 58
MARSHALL	96	UNKNOWN**	2	0.07	MARSHALL	PACIFIC	1691	66	7	39	8	60	6	616 58
SOMALI	96	UNKNOWN**	4	0.07	SOMALIA	AFRICA	1651	69	7	67	9	69	8	686 70
TURKISH	96	ARMENIAN	1	0.07	TURKEY	EUROPE	19371	53	7	49	8	50	8	505 71
NORWEGIAN	95	UNKNOWN**	3	0.10	NORWAY	EUROPE	8021	60	5	55	7	55	6	566 52
SWEDISH	95	UNKNOWN**	3	0.09	SWEDEN	EUROPE	5401	63	6	57	6	58	6	599 65
POLISH	94	HEBREW	1	0.12	POLAND	EUROPE	2431	56	7	51	9	52	8	532 70
RUSSIAN	94	ARMENIAN	3	0.11	USSR	EUROPE	2241	56	7	50	8	50	8	521 69
BENGALI	91	UNKNOWN**	7	0.17	BANGLADE	ASIA	10051	50	8	51	8	53	8	512 72
ROMANIAN	90	UNKNOWN**	3	0.20	ROMANIA	EUROPE	1241	57	8	59	8	57	8	559 68
FINNISH	87	SWEDISH	10	0.23	FINLAND	EUROPE	2881	60	5	57	7	56	7	575 56
HEBREW	87	ARABIC	10	0.24	ISRAEL	MID EAST	23521	56	8	51	8	50	9	528 76
INDONESI	87	JAVANESE	3	0.24	INDONESI	ASIA	35081	50	7	47	7	48	7	486 69
SERBO-CRO	87			0.22	YUGOSLAV	EUROPE	2221	55	7	51	8	53	8	528 71
BURMESE	86	CHINESE	7	0.25	BURMA	ASIA	1941	52	8	49	8	50	9	502 75
LAO	84	CHINESE	6	0.29	LAOS	ASIA	681	52	7	46	9	46	9	479 77
URDU#	81			0.33	PAKISTAN	ASIA	38331	53	8	51	9	53	8	521 77
SHONA	80	ZULU	7	0.35	RHODESIA	AFRICA	4361	59	6	58	6	56	6	559 50
CAMBODIAN	79	CHINESE	11	0.37	KHMER R	ASIA	661	52	6	48	7	49	8	496 55
CZECH	77	SLOVAK	17	0.38	CZECHOSL	EUROPE	521	59	6	55	8	57	7	568 60
SWAHILI	76	GUJARATI	15	0.40	TANZANIA	AFRICA	3011	53	7	55	7	55	7	542 62
TAGALOG	75	CEBUANO	7	0.43	PHILIPPI	ASIA	26621	59	6	57	7	59	7	580 61
AMHARIC	68	TIGRINYA	25	0.47	ETHIOPIA	AFRICA	4761	53	7	51	8	50	8	515 72
SINHALES	64	TAMIL	32	0.48	SRILANKA	ASIA	6491	56	8	55	8	57	7	560 69
EWE	63	FRENCH	19	0.56	YOGO	AFRICA	161	67	9	50	8	49	9	490 78
MALAGASY	56	FRENCH	33	0.58	MADAGASC	AFRICA	271	52	7	52	7	56	5	528 56
ICELANDIC	54	UNKNOWN**	44	0.51	ICELAND	EUROPE	1961	60	5	56	7	55	9	571 60
IBO	48	UNKNOWN**	16	0.71	NIGERIA	AFRICA	135571	48	7	53	6	53	6	511 53
MALAY	42	CHINESE	38	0.58	MALAYSIA	ASIA	71561	57	6	59	7	56	7	559 58
VIETNAMESE	47	ANNAMESE	46	0.57	VIETNAM	ASIA	17191	53	7	48	8	50	8	503 65
AKAN	45	GA	19	0.72	GHANA	AFRICA	21931	59	7	58	6	57	6	581 53
WOLOF	44	FRENCH	25	0.70	SENEGAL	AFRICA	691	48	8	49	7	50	7	489 65
SETSWANA	42	UNKNOWN**	29	0.71	BOTSWANA	AFRICA	381	56	6	57	7	56	5	563 58
FIJIAN	38	HINDI	33	0.72	FIJI ISL	PACIFIC	861	55	7	53	8	53	8	535 68
MALINKE	41	BAMBARA	38	0.68	MALI	AFRICA	421	63	8	39	10	63	9	613 96
UGANDA	33	UNKNOWN**	22	0.78	UGANDA	AFRICA	1471	59	7	58	6	56	6	560 53
PALAUAN	32	TRUKESE	23	0.79	CARO ILS	PACIFIC	9101	68	7	62	8	62	7	662 66
KIKUYU	30	UNKNOWN**	22	0.80	KENYA	AFRICA	8081	53	8	56	7	55	7	566 61
HINDI	21	GUJAPATI	18	0.88	INDIA	ASIA	137061	56	8	55	8	57	7	553 71
HAUSA	17	UNKNOWN**	17	0.89	NIGER	AFRICA	291	67	8	67	7	50	7	579 62
ZULU*** 130				0.56	SWAZILAN	AFRICA	231	57	5	56	7	56	5	561 50
SEPEDI*** 100				0.51	LESOTHO	AFRICA	431	52	7	58	6	55	6	569 52
MENDE*** 36				0.69	SIERRA L	AFRICA	1961	53	7	54	7	53	7	530 63
BULGARIAN*** 32				0.62	BULGARIA	EUROPE	571	53	8	51	8	53	7	522 66
WOLOF*** 21				0.75	GAMBIA	AFRICA	661	51	8	53	9	52	9	522 78
GUJARATI*** 19				0.62	ZAMBIA	AFRICA	1831	55	7	56	8	55	7	557 69

*AN ESTIMATE OF THE PROBABILITY THAT TWO RANDOMLY SELECTED CANDIDATES FROM A COUNTRY WILL NOT REPORT THE SAME NATIVE LANGUAGE (AFTER HUDSON AND TAYLOR, 1972).

**UNKNOWN IN THIS COLUMN INDICATES THAT AN UNLISTED LANGUAGE, OR NONRESPONSE TO THE LANGUAGE QUESTION, COLLECTIVELY ACCOUNTED FOR A HIGHER PERCENTAGE OF CANDIDATES THAN ANY BUT THE MOST FREQUENTLY REPORTED.

***FOR THIS GROUP, "NO RESPONSE" OR "LANGUAGE NOT LISTED" COLLECTIVELY ACCOUNTED FOR A HIGHER PERCENTAGE OF CANDIDATES THAN ANY LISTED LANGUAGE CODE.

#AN ESTIMATE IS PROVIDED FOR THE INDEX OF LINGUISTIC FRACTIONALIZATION AND NO SECOND LANGUAGE IS LISTED DUE TO RECODING.

Overall, the 12 languages that were dominant for candidates from two or more native countries accounted for 82 of the 139 native country groups in Table 6.2. Each of the remaining 57 country groups was characterized by a different dominant language.

Table 6.3 is similar to Table 6.2. However, in Table 6.3, data for native countries with 15 or more candidates are arrayed alphabetically by the most frequently reported native language--i.e., the dominant language for a country's candidate contingent. Where one language is dominant for two or more countries, the countries are presented in descending order with respect to degree of linguistic homogeneity.

TABLE 6.9

DATA ON NATIVE LANGUAGES AND TOEFL SCORES WITHOUT REGARD TO NATIVE LANGUAGE PATTERNS OF CANDIDATES, BY COUNTRY, LISTED ALPHABETICALLY ACCORDING TO THE MOST FREQUENTLY REPORTED NATIVE LANGUAGE FOR EACH REPORTED NATIVE COUNTRY: INTERNATIONAL AND SPECIAL TESTING PROGRAMS, 1977 - 1979

1977-78 & 1978-79

MOST PREVALENT LANGUAGE*	%	SECOND MOST PREVALENT LANGUAGE**	%	INDEX OF LINGUISTIC FRACTIONALIZATION***	COUNTRY	REGION	TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE#								
								LISTEN		WRITE		READ		TOTAL	
							N	M	SD	M	SD	M	SD	M	SD
AKAN	45	GA	19	0.72	GHANA	AFRICA	(2193)	56	7	58	6	57	6	561	53
AMHARIC	68	TIGRINYA	25	0.47	ETHIOPIA	AFRICA	(476)	53	7	51	8	50	8	515	72
ARABIC	97	UNKNOWN	2	0.06	SAUDI AR	MID EAST	(3631)	68	7	62	8	61	7	636	66
ARABIC	95	UNKNOWN	4	0.10	KUWAIT	MID EAST	(1128)	59	8	62	8	62	7	661	65
ARABIC	95	ARMENIAN	2	0.10	LEBANON	MID EAST	(4329)	52	7	60	8	67	8	691	72
ARABIC	95	UNKNOWN	3	0.10	LIBYA	AFRICA	(1411)	38	6	61	7	61	7	631	58
ARABIC	94	UNKNOWN	4	0.11	SUDAN	AFRICA	(570)	66	7	68	7	69	7	675	58
ARABIC	94	UNKNOWN	5	0.12	JORDAN	MID EAST	(5183)	50	7	66	8	66	8	659	69
ARABIC	93	UNKNOWN	4	0.13	ARAB EMI	MID EAST	(135)	51	7	63	7	62	7	653	59
ARABIC	93	ARMENIAN	4	0.13	SYRIA	MID EAST	(645)	52	7	67	8	66	8	681	72
ARABIC	93	AMHARIC	3	0.13	YEMEN	MID EAST	(158)	50	7	65	8	65	8	666	71
ARABIC	93	AMHARIC	3	0.14	QATAR	MID EAST	(138)	69	7	61	7	60	6	633	60
ARABIC	92	JAPANESE	2	0.15	BAHRAIN	MID EAST	(224)	52	8	66	9	66	9	672	79
ARABIC	92	UNKNOWN	3	0.16	OMAN	MID EAST	(60)	51	7	65	9	66	8	666	68
ARABIC	91	AMHARIC	6	0.17	EGYPT	AFRICA	(1676)	69	8	67	9	67	8	678	78
ARABIC	89	UNKNOWN	5	0.20	IRAQ	MID EAST	(1009)	69	8	66	8	66	8	658	73
ARABIC	70	FRENCH	21	0.46	TUNISIA	AFRICA	(81)	69	7	69	8	71	8	697	68
ARABIC	57	FRENCH	23	0.60	ALGERIA	AFRICA	(437)	51	7	50	7	50	8	502	65
ARABIC	50	FRENCH	33	0.63	MOROCCO	AFRICA	(191)	56	7	53	8	56	8	533	69
BENGALI	91	UNKNOWN	7	0.17	BANGLADE	ASIA	(1005)	50	8	51	8	53	8	512	72
BURMESE	86	CHINESE	7	0.25	BURMA	ASIA	(194)	52	8	69	8	70	9	702	75
CAMBODIA	79	CHINESE	11	0.37	KHMER R	ASIA	(66)	52	6	68	7	69	8	696	55
CHINESE	99	UNKNOWN	1	0.02	CHINA (Taiwan)	ASIA	(30731)	51	6	50	6	52	6	509	53
CHINESE	99	UNKNOWN	1	0.03	HONGKONG	ASIA	(21395)	52	7	50	7	52	7	515	60
CHINESE	84	MALAY	9	0.28	MACAO	ASIA	(405)	50	7	51	7	51	7	507	61
CHINESE	73	ENGLISH	19	0.43	SINGAPOR	ASIA	(1036)	58	7	55	8	57	7	568	68
CHINESE	71	MALAY	19	0.46	BRUNEI	ASIA	(69)	56	6	51	7	52	7	531	57
CHINESE	58	UNKNOWN	25	0.77	BHUTAN	ASIA	(16)	50	8	50	10	52	8	509	81
CZECH	77	SLOVAK	17	0.38	CZECHOSL	EUROPE	(52)	59	6	55	8	57	7	568	60
DANISH	96	CHINESE	1	0.07	DENMARK	EUROPE	(194)	61	6	59	6	58	6	598	58
DUTCH	96	UNKNOWN	1	0.07	NETHERLS	EUROPE	(844)	62	3	58	6	59	5	596	61
DUTCH	94	UNKNOWN	4	0.11	SURINAM	AMERICA	(70)	57	6	53	6	53	6	562	56
DUTCH	79	UNKNOWN	16	0.35	NETH ANT	AMERICA	(208)	61	5	59	7	59	6	602	52
ENGLISH	100		0	0.0	JAMAICA	AMERICA	(29)	60	5	55	7	56	7	567	52
ENGLISH	95	CHINESE	3	0.10	GUYANA	AMERICA	(40)	59	5	58	7	58	7	583	55
ENGLISH	92	CHINESE	6	0.15	TRINIDAD	AMERICA	(76)	62	5	58	7	58	8	591	58
ENGLISH	49	UNKNOWN	37	0.62	LIBERIA	AFRICA	(260)	53	7	52	8	51	7	523	65
ENGLISH	37	CHINESE	23	0.79	GR BRITA	EUROPE	(96)	57	9	55	9	55	9	556	83
ENGLISH	39	AFRIKAAN	19	0.82	S AFRICA	AFRICA	(168)	59	7	59	7	60	7	594	63
EWE	63	FRENCH	19	0.56	TOGO	AFRICA	(16)	67	9	58	8	69	9	690	70

TABLE 6.3, continued

TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE

MOST PREVALENT LANGUAGE*	%	SECOND MOST PREVALENT LANGUAGE**	%	INDEX OF LINGUISTIC FRACTIONALIZATION***	COUNTRY	REGION	N	LISTEN M	LISTEN SD	WRITE M	WRITE SD	READ M	READ SD	TOTAL M	TOTAL SD
PARSI	96	####		0.07	IRAN	MID EAST	(34421)	50	8	65	8	66	8	661	68
PARSI	64	PUSHTU	27	0.69	AFGHANIS	ASIA									
FIJIAN	38	HINDI	33	0.72	FIJI ISL	PACIFIC	(169)	51	8	65	9	65	8	670	75
FINNISH	87	SWEDISH	10	0.23	FINLAND	EUROPE	(861)	55	7	53	8	53	8	535	68
FRENCH	97	UNKNOWN	2	0.05	HAITI	AMERICA	(288)	60	5	57	7	56	7	575	56
FRENCH	96	UNKNOWN	1	0.07	FRANCE	EUROPE	(910)	51	9	60	9	50	8	595	77
FRENCH	81	TAMITIAN	12	0.33	TAHITI	PACIFIC	(2194)	56	6	55	6	58	5	565	52
FRENCH	79	ENGLISH	8	0.43	CANADA	AMERICA	(413)	52	7	49	8	50	6	500	55
FRENCH	70	SPANISH	30	0.42	MARTINIQ	AMERICA	(444)	59	6	56	8	59	7	570	65
FRENCH	55	DUTCH	17	0.63	BELGIUM	EUROPE	(101)	56	7	52	7	52	6	530	63
FRENCH	52	AKAN	27	0.64	IVORY CO	AFRICA	(5141)	59	6	56	7	59	5	579	52
FRENCH	32	SWAHILI	15	0.82	ZAIRE	AFRICA	(195)	58	7	60	8	59	6	625	60
GANDA	33	UNKNOWN	22	0.78	UGANDA	AFRICA	(1421)	65	9	66	9	67	8	661	76
GERMAN	97	UNKNOWN	1	0.06	GERMANY	EUROPE	(1471)	56	7	58	6	56	6	560	53
GERMAN	91	GREEK	3	0.16	AUSTRIA	EUROPE	(1672)	60	5	57	6	58	5	581	48
GERMAN	66	FRENCH	26	0.49	SWITZERL	EUROPE	(1501)	60	5	57	6	58	6	582	51
GREEK	98	UNKNOWN	1	0.03	GREECE	EUROPE	(5231)	59	5	56	7	57	6	574	51
GREEK	92	TURKISH	6	0.17	CYPRUS	EUROPE	(32001)	56	7	50	8	50	8	510	72
							(9201)	53	8	48	9	48	8	487	75
HEBREW	87	ARABIC	10	0.24	ISRAEL	MID EAST									
HINDI	21	GUJARATI	16	0.88	INDIA	ASIA	(23521)	56	8	51	8	50	9	528	74
HUNGARIA	97	CHINESE	3	0.07	HUNGARY	EUROPE	(13704)	56	8	55	8	57	7	553	71
IBO	48	UNKNOWN	16	0.71	NIGERIA	AFRICA	(591)	58	7	56	9	56	8	559	71
ICELANDI	56	UNKNOWN	44	0.51	ICELAND	EUROPE	(13557)	60	7	53	6	53	6	511	53
INDONESI	87	JAVANESE	3	0.24	INDONESI	ASIA	(1961)	60	5	56	7	55	8	571	60
ITALIAN	97	UNKNOWN	1	0.06	ITALY	EUROPE	(35081)	50	7	47	7	48	7	489	66
JAPANESE	97	UNKNOWN	2	0.06	JAPAN	ASIA	(10461)	55	7	54	7	57	6	553	61
JAPANESE	70	UNKNOWN	8	0.50	AUSTRALI	PACIFIC	(123381)	52	7	48	8	49	8	488	68
KIKUYU	10	UNKNOWN	22	0.80	KENYA	AFRICA	(661)	52	8	46	9	46	9	478	82
KOREAN	97	JAPANESE	2	0.06	KOREA	ASIA	(888)	53	8	56	7	55	7	546	61
LAO	84	CHINESE	4	0.29	LAOS	ASIA	(7475)	50	7	50	8	53	7	507	61
MALAGASY	56	FRENCH	33	0.58	MADAGASC	AFRICA	(681)	52	7	46	9	46	9	479	77
MALAY	52	CHINESE	38	0.58	MALAYSIA	ASIA	(271)	52	7	52	7	49	5	528	56
MALINKE	41	BAMBARA	38	0.68	MALI	AFRICA	(71541)	57	6	54	7	56	7	559	58
MARSHALL	96	UNKNOWN	2	0.07	MARSHALL	PACIFIC	(421)	43	8	39	10	43	9	413	96
NEPALI	99	####		0.01	NEPAL	ASIA	(1691)	46	7	39	8	40	6	416	58
NORWEGIAN	95	UNKNOWN	3	0.10	NORWAY	EUROPE	(1861)	50	8	52	8	54	7	523	65
PALAUAN	32	TRUKESE	23	0.79	CARO ILS	PACIFIC	(8021)	60	5	55	7	55	6	566	52
POLISH	94	HEBREW	1	0.12	POLAND	EUROPE	(9101)	48	7	42	8	42	7	442	66
PORTJGUESE	100		0	0.0	AZORES	EUROPE	(2431)	56	7	51	9	52	8	532	70
PORTJGUESE	97	UNKNOWN	2	0.06	BRAZIL	AMERICA	(231)	57	7	50	9	51	6	525	69
PORTJGUESE	91	CHINESE	6	0.17	PORTUGAL	EUROPE	(24811)	53	8	49	9	53	7	516	72
PORTUGUESE	87	UNKNOWN	13	0.23	CP VERDE	AFRICA	(2531)	57	7	52	8	56	7	562	66
PORTUGUESE	76	UNKNOWN	26	0.39	ANGOLA	AFRICA	(151)	52	7	46	8	42	8	461	71
ROMANIAN	90	UNKNOWN	3	0.20	ROMANIA	EUROPE	(191)	49	9	46	9	48	9	476	81
RUSSIAN	96	ARMENIAN	3	0.11	USSR	EUROPE	(1241)	57	8	56	8	57	8	559	68
SAMOAN	99	SPANISH	1	0.02	W SAMOA	PACIFIC	(2241)	56	7	50	8	50	8	521	69
SAMOAN	90	UNKNOWN	6	0.19	AM SAMOA	PACIFIC	(1151)	51	7	45	8	45	8	470	68
SERBO-CR	87	####		0.22	YUGOSLAV	EUROPE	(6631)	50	8	42	9	41	8	444	75
SETSWANA	42	UNKNOWN	29	0.71	BOTSWANA	AFRICA	(2221)	55	7	51	8	53	8	528	71
SHONA	80	ZULU	7	0.35	RHODESIA	AFRICA	(381)	56	6	57	7	56	5	563	58
SINHALES	64	TAMIL	32	0.48	SRILANKA	ASIA	(4361)	56	6	58	6	56	6	559	50
SOMALI	96	UNKNOWN	4	0.07	SOMALIA	AFRICA	(6491)	56	8	55	8	57	7	560	69
							(1651)	69	7	67	9	69	8	686	70

TABLE 6.3, concluded

MOST PREVALENT LANGUAGE*		SECOND MOST PREVALENT LANGUAGE**		INDEX OF LINGUISTIC FRACTIONAL-IZATION***	COUNTRY	REGION	TOEFL SCORE DATA: ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE#						
								LISTEN		WRITE	READ	TOTAL	
							N	M	SD	M SD	M SD	M	SD
SPANISH	100		0	0.0	DOMINICA	AMERICA	(226)	56	8	48 9	52 8	512	76
SPANISH	100	ENGLISH	0	0.01	ELSALVAD	AMERICA	(570)	55	7	49 9	52 7	519	70
SPANISH	99	ARABIC	0	0.01	GUATEMAL	AMERICA	(290)	56	7	50 9	54 7	532	66
SPANISH	99	UNKNOWN	1	0.02	ECUADOR	AMERICA	(550)	53	8	47 8	51 7	504	70
SPANISH	99	UNKNOWN	1	0.03	CHILE	AMERICA	(831)	54	8	49 8	54 7	521	70
SPANISH	99	UNKNOWN	1	0.03	COSTA RI	AMERICA	(492)	55	8	49 9	53 7	523	75
SPANISH	99	CHINESE	1	0.03	HONDURAS	AMERICA	(399)	55	8	49 9	52 7	520	75
SPANISH	99	UNKNOWN	1	0.03	MEXICO	AMERICA	(3464)	54	8	49 8	54 7	522	68
SPANISH	98	UNKNOWN	1	0.03	PERU	AMERICA	(1072)	54	8	49 9	53 8	517	74
SPANISH	98	UNKNOWN	1	0.03	CUBA	AMERICA	(169)	59	7	53 8	56 7	560	69
SPANISH	98	UNKNOWN	1	0.04	PUERTO R	AMERICA	(777)	56	8	50 9	55 8	539	75
SPANISH	98	UNKNOWN	1	0.04	VENEZUEL	AMERICA	(3934)	52	8	46 8	50 7	490	68
SPANISH	98	UNKNOWN	1	0.04	COLOMBIA	AMERICA	(1830)	54	8	49 9	52 7	515	72
SPANISH	98	UNKNOWN	2	0.34	NICARAGU	AMERICA	(594)	56	7	47 8	51 7	506	69
SPANISH	98	UNKNOWN	1	0.05	ARGENTIN	AMERICA	(586)	56	7	53 8	57 6	552	65
SPANISH	98	UNKNOWN	1	0.05	PANAMA	AMERICA	(729)	55	8	48 9	52 7	513	73
SPANISH	97	UNKNOWN	2	0.06	BOLIVIA	AMERICA	(419)	54	7	48 8	52 7	515	70
SPANISH	95	FRENCH	1	0.10	URUGUAY	AMERICA	(140)	56	8	53 9	57 7	552	71
SPANISH	90	CHINESE	6	0.18	PARAGUAY	AMERICA	(52)	53	8	48 8	52 7	512	69
SPANISH	87	CATALAN	9	0.23	SPAIN	EUROPE	(510)	56	7	52 8	57 6	567	61
SPANISH	34	ENGLISH	21	0.82	USA	AMERICA	(281)	59	7	55 9	55 8	566	76
SWAHILI	76	GUJARATI	15	0.40	TANZANIA	AFRICA	(301)	53	7	55 7	55 7	542	62
SWEDISH	95	UNKNOWN	3	0.09	SWEDEN	EUROPE	(540)	63	6	57 6	58 6	589	65
TAGALOG	79	CEBUANO	7	0.43	PHILIPPI	ASIA	(2662)	59	6	57 7	59 7	580	61
THAI	98	UNKNOWN	1	0.04	THAILAND	ASIA	(8176)	49	7	46 7	47 7	471	62
TONGAN	98	SAMOAN	1	0.04	TONGA	PACIFIC	(90)	48	5	43 6	43 5	447	56
TURKISH	96	ARMENIAN	1	0.07	TURKEY	EUROPE	(1957)	53	7	49 8	50 8	505	71
UNKNOWN	93	ENGLISH	2	0.14	MARIANA	PACIFIC	(160)	56	6	46 8	47 7	497	61
UNKNOWN###	90	ENGLISH	2	0.20	MALAWI	AFRICA	(48)	57	7	57 7	57 6	571	58
UNKNOWN###	71	FRENCH	16	0.47	CAMEROON	AFRICA	(336)	51	7	56 7	53 6	529	69
UNKNOWN###	58	GUJARATI	19	0.62	ZAMBIA	AFRICA	(183)	55	7	56 8	55 7	557	69
UNKNOWN###	56	SEPEDI	42	0.51	LESOTHO	AFRICA	(43)	52	7	50 6	55 6	549	52
UNKNOWN###	53	BULGARIA	32	0.62	BULGARIA	EUROPE	(57)	53	8	51 8	53 7	522	66
UNKNOWN###	48	FRENCH	31	0.65	MAURITIU	ASIA	(48)	57	6	57 6	59 6	571	68
UNKNOWN###	48	FRENCH	26	0.65	LUXEMBOU	EUROPE	(23)	61	6	59 5	60 6	600	52
UNKNOWN###	48	ZULU	48	0.54	SWAZILAN	AFRICA	(23)	57	5	56 7	56 5	561	66
UNKNOWN###	40	HERDE	36	0.69	SIERRA L	AFRICA	(196)	53	7	54 7	53 7	530	63
UNKNOWN###	39	WOLOF	21	0.75	GAMBIA	AFRICA	(66)	51	8	53 9	52 9	522	78
UNKNOWN###	35	FRENCH	22	0.78	UP VOLTA	AFRICA	(23)	50	6	48 6	49 6	496	47
UNKNOWN###	17	HAUSA	17	0.89	NIGER	AFRICA	(29)	47	8	47 7	50 7	479	62
URDU	81	####		0.33	PAKISTAN	ASIA	(3833)	53	8	51 9	53 8	521	77
VIETNAME	47	ANNAMESE	46	0.57	VIETNAM	ASIA	(1719)	52	7	48 8	50 8	503	65
WOLOF	44	FRENCH	39	0.70	SENEGAL	AFRICA	(69)	48	8	43 7	50 7	489	65

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*NATIVE LANGUAGE MOST FREQUENTLY REPORTED BY CANDIDATES FROM THE COUNTRY DESIGNATED AS A PERCENT OF ALL CANDIDATES

**NATIVE LANGUAGE SECOND MOST FREQUENTLY REPORTED AS A PERCENT OF TOTAL NUMBER OF CANDIDATES, BY COUNTRY.

***AN ESTIMATE OF THE PROBABILITY THAT TWO RANDOMLY SELECTED CANDIDATES FROM A COUNTRY WILL NOT REPORT THE SAME NATIVE LANGUAGE.

#TOEFL TOTAL SCORE DATA FOR ALL DEGREE SEEKERS WITHOUT REGARD TO LANGUAGE.

@NO RESPONSE TO THE LANGUAGE QUESTION OR AN UNLISTED-LANGUAGE CODE, COLLECTIVELY, ACCOUNTED FOR A HIGHER PERCENTAGE OF CANDIDATES THAN ANY LANGUAGE REPORTED.

@@NO RESPONSE TO THE LANGUAGE QUESTION OR AN UNLISTED-LANGUAGE CODE, COLLECTIVELY, ACCOUNTED FOR A HIGHER PERCENTAGE OF CANDIDATES THAN ANY LANGUAGE; THE MOST FREQUENTLY REPORTED LANGUAGE, IF ANY, IS LISTED IN THE SECOND COLUMN.

@@@NO SECOND LANGUAGE LISTED DUE TO MISCODING. THE I.L.F. IS ESTIMATED.

SECTION 7. TOEFL VARIABLES FOR NATIVE COUNTRY CONTINGENTS AND SOCIAL INDICATOR VARIABLES FOR NATIVE COUNTRIES: PATTERNS OF VARIATION AND COVARIATION

TOEFL candidates classified by designated native country (or country of origin), as indicated in preceding sections, differ markedly with respect to a number of academic, demographic, and testing-related variables, as well as in performance on TOEFL. Examination and analysis of trends across country groups with respect to these variables has been focused primarily on data for the 25 leading countries of origin; and in most instances findings for various native country contingents (e.g., with respect to sex composition or performance on TOEFL) have been compared with findings for all degree-planning candidates (i.e., all individuals without regard to country).

This section focuses primarily on the native country as the unit of analysis and presents (a) measures of central tendency and variability of summary statistics on TOEFL candidate variables for 129 native country contingents; (b) correlational results based on summary data for these contingents that point up patterns of covariation between mean TOEFL scores and the other TOEFL candidate variables across countries; and (c) correlational results that show patterns of covariation between the relative standing of countries of the world on selected social and economic indicator variables and the relative standing of TOEFL candidate contingents from these countries on the TOEFL variables under consideration.

TOEFL Candidate Variables

For each native country contingent of TOEFL candidates during the period from September 1977 through August 1979, summary statistics on TOEFL variables outlined below were available for analysis.*

- Percentage of all test takers indicating that they planned to study toward an undergraduate or graduate degree in a college or university in the United States or Canada
- Percent male
- Percent tested in the U.S.A. or Canada (domestic center) vs. percent tested elsewhere (foreign center)
- Percent designating institutional recipients for their score reports

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*Except for the first-listed variable, the base for all summary statistics was the degree-planning population, not all examinees.

U.S. higher education institutions only
U.S. higher education institutions and non-U.S. higher education institutions, or agencies/embassies concerned with international students regardless of location
Both institutional patterns above

- Percent not designating any institutional recipients (score reports transmitted only to the candidates)

- Percent who were repeating candidates (i.e., who reported having taken TOEFL previously one or more times)

- Mean age at time of most recent testing

- Homogeneity/heterogeneity with respect to native language

  Dominant Language Index (the language reported by the greatest number of candidates, in percent)

  Index of Linguistic Fractionalization (an estimate of the probability that two candidates from the same native country will not report the same native language, highly inversely related to the DLI)

- Mean scores on TOEFL: Listening Comprehension, Structure and Written Expression, Reading Comprehension, and total

Table 7.1 shows the mean and the median of distributions data for 129 country groups (e.g., mean percent male, mean percent planning postsecondary study as a percentage of all examinees), the standard deviation of the distributions, and observed minimum and maximum values. Similar summary data for mean TOEFL scores are provided in Table 7.2.

In both tables, summary data are shown for all degree planners, and for undergraduate and graduate planners. For comparative purposes, a summary statistic based on data for all degree planners without regard to country (the "all individuals" column) is provided. Thus, for example, it may be determined from Table 7.1 that some 83 percent of all TOEFL test takers indicated plans for postsecondary study in the United States or Canada rather than some other reason for taking TOEFL. The mean for 129 countries was 82.5, the median 85.8, and the standard deviation of the percent statistic 12.9; the minimum percent of degree planners for a country was 27, and the maximum was 98.

For most variables, the "all individuals" values and the mean values of the respective country statistics are quite similar. However, it is evident that there are relatively large discrepancies in these two values for certain TOEFL variables, namely, percent designating U.S. higher education institutions only, percent designating no institutions or agencies to receive score reports, and percent taking TOEFL previously.

TABLE 7.1

SELECTED CHARACTERISTICS OF CANDIDATES WHO SPECIFIED PLANS TO ENTER AN UNDERGRADUATE OR GRADUATE INSTITUTION AS THE REASON FOR TAKING TOEFL, AND AN INTENTION TO SEEK A DEGREE, RESPECTIVELY, AND DATA DESCRIPTIVE OF THE DISTRIBUTIONS OF THESE CHARACTERISTICS FOR 129 NATIVE COUNTRY GROUPS: INTERNATIONAL AND SPECIAL TESTING PROGRAMS ONLY, 1977-78 and 1978-79

Characteristic	All individuals	Measures of central tendency and variability for native-country groups (N = 129)				
	%	Mean %	Median %	S.D. %	Min %	Max %
Plan undergraduate or graduate degree (% of all test-takers)*	83	82.5	85.8	12.9	27	98
Undergraduate degree plans (% TT)*	42	45.8	43.3	19.9	9	88
Graduate degree plans (% TT)*	41	36.6	32.5	16.8	9	88
Male (% of degree-planners)	72	70.8	69.4	13.8	28	99
Undergraduate		67.6	70.1	15.1	22	99
Graduate		72.8	74.4	14.8	20	100
Tested in nondomestic center	71	69.4	74.1	21.8	11	100
Undergraduate planners		63.6	67.6	22.4	14	100
Graduate planners		73.9	80.0	21.9	6	100
Designated both U.S. and Non-U.S. agency or institution to receive score reports	5	5.4	3.7	6.3	0	61
Undergraduate planners		4.9	3.2	7.5	0	70
Graduate planners		5.7	3.9	5.5	0	33
Designated an embassy, agency, or foreign DI only	7	6.4	4.1	6.5	0	47
Undergraduate planners		7.3	4.5	8.1	0	55
Graduate planners		5.5	3.8	5.4	0	32
Designated a U.S. higher institution only	38	49.5	51.7	16.4	4	87
Undergraduate planners		50.1	51.5	17.0	5	100
Graduate planners		48.2	49.2	17.5	4	89
Designated no agency or institution to receive reports	50	38.7	35.8	14.9	9	80
Undergraduate planners		37.6	34.4	15.7	0	77
Graduate planners		40.6	39.3	16.4	6	85
Took TOEFL previously (self report)	32	19.2	14.6	14.2	0	65
Undergraduate planners		18.4	13.8	14.4	0	65
Graduate planners		19.4	16.0	14.1	0	66
Most frequently reported native language as percent of all reported	N.A.	76.9	88.5	23.2	17	100
Undergraduate planners		77.4	88.2	22.4	20	100
Graduate planners		76.6	87.0	23.4	20	100
Mean age in years#	23.8	23.9	24.0	2.1	20	28
Undergraduate planners	21.4	21.7	21.7	1.6	18	26
Graduate planners	26.3	26.8	27.0	2.0	21	32

*The base for this percentage is the total number of test-takers. The base for other percentages in the table is the number of degree-planners.

#For undergraduate planners only individuals in the 15-45 year age range were included; for graduate planners the mean is based on data for individuals in the 20-50 year age range.

TABLE 7.2

MEASURES OF CENTRAL TENDENCY AND VARIABILITY OF TOEFL SCORE MEANS FOR 129 NATIVE COUNTRY GROUPS, 1977-79: POSTSECONDARY DEGREE-PLANNING CANDIDATES, BY LEVEL

TOEFL	All planners			Undergraduate planners			Graduate planners		
	Mean	SD	Min-Max	Mean	SD	Min-Max	Mean	SD	Min-Max
Country data*									
Listening Comprehension	53.7	4.1	43-63	54.1	4.0	44-63	53.4	4.2	43-63
Written Expression	50.7	4.6	39-61	50.3	4.5	40-57	51.1	5.2	39-62
Reading Comprehension	51.8	4.9	41-60	50.8	4.7	39-58	52.7	5.2	39-62
Total	520.4	42.8	431-596	517.0	41.8	416-591	523.6	46.0	397-616
Individual data**									
Listening Comprehension	52	8	25-70	52	8		52	8	
Written Expression	50	8	20-68	49	8		50	8	
Reading Comprehension	50	9	20-67	49	9		52	8	
Total	505	73	240-677	499	73		511	72	

*For all summary statistics, involving native country data, N = 129.

**Means and standard deviations are for the 1977-79 TOEFL population of degree-planning candidates. However, the min-max values are taken from data reported in the TOEFL Manual (1981) for all TOEFL takers during 1978-80, without regard to reason for taking TOEFL. For individual data, for all planners, N = 235,738; for undergraduate planners, N = 119,592; for graduate planners, N = 116,146.

- Note, for example, that fully 50 percent of all degree planners did not designate institutional score report recipients but the mean percentage for 129 countries was only 38.7; on the other hand, whereas 38 percent of all candidates designated U.S. higher education institutions only, the mean percentage for the 129 country groups was almost 50.*

- These discrepancies reflect an especially high (or low) incidence of the behaviors under consideration in large candidate populations from a relatively small number of countries, primarily countries from the TOEFL Asian and Mideastern regions (see Section 2, Tables 2.1 and 2.2, for detail).

A similar pattern of discrepancy between mean values based on data for all individuals and the mean for candidate populations by native country may be seen in Table 7.2.

- The higher mean values for country means than for individual score data reflect a relatively high concentration of lower-scoring individuals in a relatively small number of native country groups with very large candidate populations.

- It is noteworthy that the variability among TOEFL means of the native country groups is quite substantial as compared to that among individuals. For example, the total score standard deviation for the country means (42.8) is almost 60 percent as large as that for all individuals (73).

Correlational Data for TOEFL Variables

The correlational data in Table 7.3 indicate the degree and direction of covariation between summary statistics (i.e., percentages or means) for 129 native country groups on selected demographic or testing-related variables, and the TOEFL total score means for the groups. Separate analyses were made based on country statistics for undergraduate and graduate degree planners, respectively. These correlational findings are consistent with those presented in previous sections, based on data for all candidates without regard to country.

- Country contingents characterized by high percentages of repeating candidates (relative to the average for all native country groups) tended to have relatively low TOEFL scores, as did groups with

*In the distribution of 129 country means, all mean values have equal weight regardless of the size of the country contingent. In calculating means for individual examinees, the size of the country contingent clearly influences the mean.

TABLE 7.3

COVARIATION OVER COUNTRIES OF CHARACTERISTICES OF CONTINGENTS OF DEGREE PLANNING CANDIDATES WITH TOEFL SCORE MEANS OF THE CANDIDATES, BY LEVEL OF PLANNED DEGREE: 1977-78 and 1978-79

Candidate characteristic (country summary statistic)	Plans group	Correlation with mean TOEFL Total of candidates with		
		U.G. plans	Grad.	All degree plans
Score report to U.S. institution (in percent)	(u.g.)	40	38	40
	(grad)	48	59	54
	(total)	49	51	52
No designated institution (in percent)	(u.g.)	-38	-29	-36
	(grad)	-58	-66	-63
	(total)	-54	-51	-55
Took TOEFL before (in percent)	(u.g.)	-60	-60	-62
	(grad)	-58	-59	-59
	(total)	-63	-63	-64
Females as percent of degree-seekers	(u.g.)	50	33	45
	(grad)	27	07	20
	(total)	46	27	40
Foreign test center (in percent)	(u.g.)	21	30	26
	(grad)	19	27	23
	(total)	21	30	26
Mean age	(u.g.)	-08	12	01
	(grad)	13	21	15
	(total)	05	18	11
Dominant language (in percent)	(u.g.)	-13	-26	-18
	(grad)	-06	-16	-11
	(total)	-09	-20	-13
	(u.g.)	(10)*	(06)	(04)
	(grad)	(16)	(01)	(10)
	(total)	(15)	(01)	(09)

Note: Correlation coefficients, without decimals, are based on summary statistics for 129 countries. For example, the percent of undergraduate-degree planners who designated a U.S. institution to receive a TOEFL score report correlated to the extent of .40 with the mean TOEFL Total scores of undergraduate-degree planners, .38 with the means of graduate-degree planners, and .40 with the country-means of all degree-planners combined.

*Coefficients in parentheses are for the TOEFL Listening subtest means and the dominant language percent.

high percentages of candidates (especially graduate planners) who did not designate institutional recipients for their TOEFL score reports. Data not shown in the table indicate a very substantial positive correlation (r = .72) between percent repeating and percent not submitting institutional score reports across country groups.

- o Country contingents with high percentages of females tended to have higher TOEFL means, especially so when data for undergraduate-planners are considered.

- o Country contingents with higher than average percentages of candidates tested in foreign centers (outside the United States or Canada) also tended to have higher mean TOEFL scores, but the relationship was not as strong as that for the other demographic and testing-related variables.

- o Except for a very small negative coefficient between mean age and mean TOEFL score for undergraduate planners, these two variables tended to be positively, albeit only slightly, related across countries.

- o Degree of linguistic homogeneity as reflected in the dominant language percent was slightly negatively related to mean TOEFL total scores across the 129 native country groups. Analyses not shown in the table indicate that this pattern held for Reading Comprehension and Written Expression, but not for Listening, for which all coefficients were positive (though smaller in absolute value).

Relating Candidate Characteristics and Country Characteristics

To this point, all analyses reported have focused exclusively on data descriptive of TOEFL candidates who designated particular native countries. Data descriptive of the native countries themselves have not been taken into account. The contingents of TOEFL candidates from the various countries clearly differ markedly in average performance on TOEFL, sex composition, location of test center, percent of repeating, score reporting vs. nonreporting, mean age, and degree of linguistic homogeneity/heterogeneity. The findings just presented indicate that differences among the candidate groups in average performance on TOEFL are systematically related to differences in score reporting patterns, incidence of repeaters, location of test center, and sex (but not mean age or degree of linguistic homogeneity).

The correlation coefficients reported in Table 7.4 reflect the relationship of data descriptive of the selected characteristics of the contingents of TOEFL candidates to indices of the relative standing of their respective countries of origin on a "developed" vs. "developing"

TABLE 7.4

CORRELATION OF CONVERTED RANKS OF COUNTRIES WITH RESPECT TO SELECTED SOCIAL AND ECONOMIC INDICATORS WITH SELECTED CHARACTERISTICS OF TOEFL CANDIDATES WHO REPORTED PLANS TO STUDY IN AN UNDERGRADUATE OR GRADUATE DEGREE PROGRAM AS THE REASON FOR TAKING TOEFL: INTERNATIONAL AND SPECIAL TESTING PROGRAMS ONLY, 1977-78 & 1978-79

Characteristics of candidates, by country (1977-1979)	Correlation with converted rank of country on designated social and economic indicator variables								1976-77 TOEFL data	
	Sch-enr rate	HiEd-enr rate	Liter-acy rate	Educ expend per cap	Eth-Ling frac #	Tele-phone/ 100,000	News-paper/ 100,000	Sci-capac-ity	Vol-ume	TOTAL mean
PERCENT OF CANDIDATES WITH CHARACTERISTIC										
Degree planners*	-52	-56	-62	-50	33	-45	-50	-62	-00	-36
Female	49	38	50	32	-26	30	34	34	07	31
Foreign test center	04	-08	01	-09	15	07	-06	02	05	31
Agency/Embassy score report	23	24	23	17	-01	18	20	12	05	-05
U.S. higher inst score report	07	-04	11	07	17	02	03	06	-26	49
Both A/E & U.S. score report	-06	-05	-13	-13	12	-06	-11	02	-00	-00
No designated institution	-14	-03	-17	-10	-21	-07	-07	-11	26	-51
Previous TOEFL (any time)	-17	-07	-22	-15	-19	-22	-12	-08	34	-61
Previous TOEFL (study period)	-02	01	-09	-06	-21	-12	-01	04	45	-44
Predominant lang (% total)	24	24	33	17	-61	22	23	20	06	-10
Linguistic fractionalization**	-23	-23	-32	-16	64	-20	-23	-20	-09	10
Mean age (u.g.)	-32	-40	-36	-31	30	-31	-37	-34	-01	-03
Mean age (grad)	-26	-22	-23	-27	21	-35	-37	-23	-14	15
MEAN TOEFL SCORE VARIABLES FOR DESIGNATED CATEGORIES										
TOEFL TOTAL (all planners)	50	33	55	44	03	50	42	37	-08	94
TOEFL LISTENING (all planners)	62	49	71	63	-17	66	62	45	-13	84
TOEFL WRITING (all planners)	38	18	39	31	16	37	27	22	-05	90
TOEFL READING (all planners)	41	27	45	32	07	40	30	36	-04	91

Note: Ranks of some 135 countries on these indicators as provided by Taylor and Hudson (1972) were converted to a standard scale with a mean of 50 and a standard deviation of 10 in which a country at the 50th percentile is given a score of 50, one at the 84th percentile a score of 60, one at the 16th percentile a score of 40, etc. Thus all ranks are positively scaled and signs of correlation coefficients may be interpreted accordingly. For example, the coefficient of -52 for "degree planners" vs. "school enrollment rate" indicates that countries with higher percentages of TOEFL candidates taking TOEFL to facilitate plans for a higher degree (rather than for professional licensure or some other reason) tend to have lower school enrollment rates and vice versa. Correlation coefficients are reported without decimals. The number of countries actually involved in the correlations ranged from 88 - 98, depending upon the variable.

#Index of Ethnic and Linguistic Fractionalization indicating probability that two inhabitants of a country if randomly selected will not be members of the same ethno-linguistic group.

*Degree planners as a percent of test takers; base for other percentages is the number of degree planners.

**Index indicating probability that two randomly selected TOEFL candidates from a given country will not report the same native language.

status continuum. Indicator data from the World Handbook of Political and Social Indicators, Second Edition (Taylor & Hudson, 1972), reflect the status of the countries on such variables as educational expenditures, school enrollment, and literacy, circa 1970.

- The World Handbook provides a variety of indices on each of a relatively large number of variables for recognized countries. Several status indices were selected for analysis, as follows: school enrollment rate, literacy rate, educational expenditures per capita, telephones per 100,000, newspapers per 100,000, and scientific capacity. The Index of Ethnic and Linguistic Fractionalization (IELF) for a country's population, which is analogous to the Index of Linguistic Fractionalization computed for TOEFL candidates contingents, is included for comparative purposes.

- Ranks of countries on all these variables, as reported by Taylor and Hudson, were converted to standard scores in such a way that high converted scores indicate correspondingly high ranks and low scores indicate correspondingly low ranks. Thus all variables in Table 7.4 are positively scaled and the correlation coefficients may be interpreted accordingly.

- In these analyses, countries with higher scores on these indices are thought of as historically "more highly developed" countries than those with lower scores on the indices--i.e., countries nearer the "developing status" pole of the developed versus developing continuum.

- Of the 129 countries with TOEFL candidate data, converted ranks on indicator variables were available for between 88 and 98, depending on the indicator variable.

- The correlational manifold among the status indicators is positive, with coefficients in the .7 range. The Index of Ethnic and Linguistic Fractionalization is inversely related to the status variables (in the -.35 to -.45 range).* A comprehensive listing of countries, with converted ranks on the indicator variables and data on the intercorrelations of the indicator variables, is provided in Appendix A.

The correlational data in Table 7.4 point up the relationship of the status indicator variables, and the IELF, to selected descriptors of TOEFL candidate contingents across countries. Several observations about these relationships are in order:

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*This means simply that ethnic and linguistically fractionated countries tend to have lower scores on the status indicators than do countries that are more homogeneous linguistically and ethnically.

- Across countries, the correlation between status indicator variables and the percentage of degree planners in a country contingent (i.e., degree planners as a percentage of all TOEFL examinees) is consistently negative. This means that among 1977-79 candidates from more highly developed countries (e.g., those with historically higher literacy rates, educational enrollment rates, and scientific capacity) the percentage planning to study abroad (rather than planning to seek professional license or to work abroad) tended to be lower than among candidates from developing countries (e.g., those with historically lower standing on such status indicators). The positive correlation between the IELF and the percentage of degree planners in a country contingent reflects the fact that this index is inversely related to the status indicator variables.

- Considering only data for degree planners, it can be seen that the status indicators are positively correlated (and that IELF is negatively correlated) with the percentage of women in a country's contingent; i.e., contingents from more highly developed countries tend to have a higher percentage of women than contingents from developing countries, and those from countries with higher IELF scores tend to have a lower percentage of women (again, a pattern reflecting the consistent inverse relationships between population fractionalization and developed versus developing status indicators).

- Score-reporting and test repetition percentages are only weakly correlated with status indicator and IELF scores.

- Correlations of candidate mean age with indicator variables, modest in magnitude, are consistently negative; coefficients are somewhat higher for undergraduate than for graduate data. These data indicate that contingents from developed countries tend to be somewhat younger on the average than those from developing countries.

- The correlation of the two indices of homogeneity/heterogeneity of TOEFL contingents with respect to reported native language with the IELF for populations are of interest. The Index of Linguistic Fractionalization for a country's candidate contingent, modeled after the IELF reported by Taylor and Hudson (1972), correlates .64 with the IELF, which in turn correlates -.61 with the percentage of a country's TOEFL candidate contingent reporting the dominant language (reflecting the strong inverse relationship between the two TOEFL candidate indices). This indicates literally that across countries, the degree of linguistic diversity in a country's candidate contingent corresponds moderately closely to the degree of linguistic <u>and</u> ethnic diversity in a country's general population.

The mean section and total scores of candidate contingents from developed countries tended to be higher than those for contingents from developing countries.

- With some variation in detail, all status indicator variables correlated positively, and moderately, with average TOEFL scores.

- Status indicators were somewhat more highly correlated with Listening Comprehension means than with total means, and with both of these scores than with either Structure and Written Expression or Reading Comprehension.

- The status indicator variable with the highest pattern of correlations with TOEFL section and total means was literacy rate; it correlated .71 with the mean on Listening Comprehension, .55 with the total mean, .45 with the Reading Comprehension mean, and .39 with the Structure and Written Expression mean.

These findings indicate that 1977-79 examinees from developed countries with historically high literacy and enrollment rates, and historically high standing on other status indicators, tended to perform better on TOEFL than examinees from developing countries--i.e., with those historically lower standing on such status indicators.

It would be useful and potentially enlightening to replicate analyses such as these using data descriptive of the current standing of the countries on the several status indicator variables, especially the standing of those countries identified as "developing" in terms of their comparatively low standing on the status indicators of several years ago. Such analyses would shed light on the stability of the positions of countries on the status variables under consideration as well as on the stability of the positions of their candidate contingents in terms of performance on TOEFL.

- There is some evidence in Table 7.4 of relatively high stability of observed differences among candidate contingents in TOEFL total means over the short term. For example, the last column of Table 7.4 shows that the correlation of TOEFL total means, 1977-79, correlated .94 with TOEFL total means for 1976-77.

The dynamics underlying the observed relationships between TOEFL score means and the status indicator variables under consideration undoubtedly are quite complex, and they remain to be identified and evaluated. In any such evaluation, it would be important to include data on such variables as the timing of initiation, amount, duration, intensity, quality, and recency of English language preparation for TOEFL candidates from the various countries, as well as on the extent to which "exposure" to instruction in English is institutionalized in the educational systems of the different countries.

In any event, it seems evident that periodic replication of analyses of TOEFL candidate characteristics and TOEFL performance are needed in order to keep abreast of possible changes over time with respect to the characteristics not only of the candidate contingents from various countries but also of the countries themselves.

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APPENDIX A

A.1 List of countries in the TOEFL Native Country File with converted ranks on selected social and economic indicators

A.2 Intercorrelations of converted ranks of countries in indicator variables and mean TOEFL Total scores of candidates, 1976-77

TABLE A.1

LIST OF COUNTRIES IN THE TOEFL COUNTRY FILE WITH TOEFL, GMAT, AND GRE CODES, CONVERTED RANKS ON EIGHT SOCIAL AND ECONOMIC INDICATOR VARIABLES, AND MEAN SCORES ON TOEFL OF CANDIDATES DURING 1976-77 (FROM THE TOEFL MANUAL) WITH ASSOCIATED VOLUME*

COUNTRY	Codes TOEFL	GMAT	GRE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TOEFL Data for 1976-1977 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AFGHANISTAN	301	1	1	35	44	39	39	56	37	42	99	52.	48.	47.	488.	43.
ALBANIA	601	000	000	63	59	54	00	63	49	49	000	000	000	000	0000	00.
ALGERIA	101	5	5	44	44	45	54	52	52	51	220	51.	48.	49.	491.	52.
AMERICAN SAMOA	501	000	000	00	00	00	00	00	00	00	441	45.	40.	39.	412.	000
ANDORRA	602	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
ANGOLA	102	000	000	38	00	35	38	44	46	44	12	000	000	000	0000	43.
ARGENTINA	201	15	15	51	46	58	59	50	58	59	328	56.	54.	58.	559.	60.
AUSTRALIA	504	20	20	66	65	60	62	50	66	63	4	000	000	000	0000	61.
AUSTRIA	603	25	25	58	58	60	60	44	62	60	74	61.	58.	60.	595.	62.
AZORES	605	30	30	00	00	00	00	00	00	00	000	000	000	000	0000	000
BAHAMAS	731	35	35	00	00	00	00	00	00	00	000	000	000	000	0000	000
BAHRAIN	534	40	40	00	00	00	00	00	00	00	61	53.	44.	43.	4 8.	000
BANGLADESH	907	45	45	42	52	44	39	56	42	41	437	50.	51.	53.	512.	55.
BARBADOS	706	50	50	57	51	57	54	48	58	54	000	000	000	000	0000	43.
BELGIUM	607	55	55	67	61	64	65	54	63	63	196	58.	55.	58.	570.	66.
BELIZE	708	56	56	00	00	00	00	00	00	00	1	000	000	000	0000	000
BENIN (DAHOMEY	125	58	58	48	38	37	42	55	43	41	5	000	000	000	0000	43.
BERMUDA	710	60	60	00	00	00	00	00	00	00	000	000	000	000	0000	000
BHUTAN	810	000	000	00	00	00	00	00	00	00	12	000	000	000	0000	000
BOLIVIA	804	65	65	47	54	47	49	57	48	54	75	54.	48.	53.	515.	51.
BOTSWANA	104	70	70	46	00	44	00	54	00	36	3	000	000	000	0000	43.
BRAZIL	807	75	75	47	52	52	48	42	53	50	1284	52.	49.	53.	516.	63.
BRUNEI	313	000	000	00	00	00	00	00	00	00	44	55.	51.	53.	534.	000
BULGARIA	610	85	85	61	66	57	58	48	55	57	19	53.	50.	51.	513.	57.
BURMA	310	90	90	48	47	51	42	52	39	43	60	53.	51.	50.	514.	53.
BURUNDI	107	000	000	39	41	00	38	36	37	45	1	000	000	000	0000	43.
CAMBODIA KHMER	346	000	000	47	49	49	48	50	39	51	42	51.	48.	49.	491.	43.
CAMEROON	110	95	95	52	46	42	44	70	39	44	20	46.	47.	49.	472.	43.
CANADA	791	100	100	55	70	66	71	61	70	70	216	56.	52.	55.	546.	62.
CAPE VERDE ISLAN	114	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
CAROLINE ISLANDS	907	107	107	00	00	00	00	00	00	00	405	47.	41.	40.	427.	000
CAYMAN ISLANDS	716	110	110	00	00	00	00	00	00	00	000	000	000	000	0000	000
CENTRAL AFRICAN	116	113	113	00	00	43	46	58	44	41	4	000	000	000	0000	43.
CHAD	119	116	116	40	00	37	42	65	40	34	3	000	000	000	0000	43.
CHILE	810	115	115	56	56	57	56	45	55	53	375	54.	49.	55.	528.	57.
CHINA PEOPLES RE	000	000	000	50	49	51	54	64	00	38	000	000	000	000	0000	64.
COLOMBIA	813	120	120	48	52	52	51	61	54	51	584	54.	49.	54.	522.	55.
COMOROS	121	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
CONGO BRAZZAVILL	122	125	125	55	49	48	46	73	50	46	1	000	000	000	0000	43.
COSTA RICA	719	130	130	58	55	57	56	62	53	52	214	54.	49.	53.	519.	51.
CUBA	722	135	135	54	54	54	54	38	55	55	139	55.	48.	55.	532.	56.
CYPRUS	613	140	140	61	50	55	57	51	57	57	287	54.	50.	49.	508.	50.
CZECHOSLOVAKIA	616	141	141	57	63	64	63	53	61	00	50	58.	55.	57.	567.	61.
DENMARK	619	150	150	63	63	71	70	60	67	66	125	62.	57.	57.	587.	61.
DJIBOUTI	126	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
DOMINICAN REPUBL	725	155	155	51	51	52	49	38	49	47	118	54.	48.	53.	515.	50.
ECUADOR	816	165	165	52	53	53	51	54	49	50	210	52.	46.	51.	493.	53.
EGYPT U ARAB REP	128	170	170	48	57	47	53	38	51	47	977	52.	48.	49.	496.	54.
EL SALVADOR	728	175	175	48	49	50	51	46	48	52	282	54.	48.	52.	512.	51.
EQUATORIAL GUINEA	131	000	000	00	00	00	00	00	00	00	1	000	000	000	0000	000
ETHIOPIA	134	185	185	34	41	37	30	50	41	38	142	52.	81.	49.	500.	48.
FIJI	950	190	190	00	00	00	00	00	00	00	36	57.	53.	52.	540.	000
FINLAND	623	195	195	58	61	71	69	46	64	66	130	60.	56.	56.	573.	59.
FRANCE	628	200	200	64	64	64	62	49	62	61	1114	59.	55.	58.	561.	71.
FRENCH GUIANA	816	000	000	00	00	00	00	00	00	00	2	000	000	000	0000	000
GABON	137	000	000	52	42	39	54	58	49	48	000	000	000	000	0000	43.
GAMBIA	140	205	205	39	00	42	44	60	45	52	8	000	000	000	0000	43.
GERMANY	631	210	210	63	58	64	61	36	63	69	1111	60.	58.	58.	588.	70.
GHANA	143	215	215	54	46	46	54	59	46	49	472	55.	57.	57.	563.	49.
GREAT BRITAIN	642	000	000	71	55	64	66	50	64	71	32	56.	48.	50.	503.	68.
GREECE	636	220	220	58	58	56	56	43	57	55	1769	53.	50.	48.	503.	54.
GREENLAND	657	225	225	00	00	00	00	00	00	00	3	000	000	000	0000	000
GRENADA	749	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
GUADALOUPE	730	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
GUAM	513	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
GUATEMALA	731	230	230	44	51	49	48	56	47	48	183	50.	51.	55.	546.	51.
GUINEA	146	233	233	39	43	42	46	61	43	43	30	45.	47.	49.	471.	43.
GUINEA-BISSAU	147	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
GUYANA	819	235	235	61	45	57	54	54	54	55	5	000	000	000	0000	43.
HAITI	734	240	240	42	45	42	39	32	48	39	228	50.	50.	52.	506.	50.
HONDURAS	737	245	245	46	44	50	48	46	46	48	115	53.	49.	52.	520.	51.
HONG KONG	322	250	250	57	52	56	56	34	59	58	14694	52.	49.	50.	509.	63.
HUN [illegible]	640	251	251	58	55	60	60	43	57	58	51	57.	51.	54.	537.	59.
[illegible]	643	255	255	77	56	71	63	60	68	65	69	61.	46.	55.	573.	53.
[illegible]	325	260	260	46	52	46	42	70	42	42	7147	53.	54.	55.	541.	64.
[illegible]	328	265	265	47	48	49	39	62	42	37	1918	50.	46.	48.	479.	59.
INDIA	351	270	270	44	48	44	51	62	50	48	10435	49.	44.	43.	492.	50.
IRAN	334	273	273	48	54	44	56	51	49	54	202	52.	46.	44.	480.	50.
IRELAND	644	275	275	70	60	59	59	38	59	60	000	000	000	000	0000	54.
ISRAEL	337	280	280	59	67	58	61	47	61	58	424	57.	51.	51.	531.	53.
ITALY	649	285	285	53	57	59	61	38	61	00	501	55.	55.	57.	558.	67.
IVORY COAST	149	290	290	43	46	44	53	46	47	00	30	49.	47.	46.	471.	43.
JAMAICA	742	295	295	54	48	57	56	40	56	54	1	000	000	000	0000	43.
JAPAN	348	300	300	67	65	60	59	32	62	65	7876	49.	47.	48.	483.	73.
JORDAN	345	305	305	52	50	48	51	40	52	53	1238	51.	47.	46.	479.	63.
KENYA	152	310	310	46	44	46	46	65	47	45	224	54.	57.	55.	552.	63.
KUWAIT	349	315	315	54	55	54	51	23	50	50	3194	48.	49.	51.	496.	56.
LAOS	352	320	320	54	00	50	68	47	57	40	202	56.	43.	42.	490.	43.
LEBANON	355	325	325	43	41	43	42	55	00	45	31	49.	43.	44.	456.	43.
LESOTHO	356	330	330	50	62	57	55	44	56	53	889	55.	49.	49.	510.	52.
LIBERIA	155	333	333	55	45	48	42	48	37	44	14	000	000	000	0000	43.
LIBYA	158	335	335	42	47	42	48	65	00	49	11	000	000	000	0000	43.
LIECHTENSTEIN	161	340	340	48	49	47	55	48	50	46	296	48.	41.	41.	435.	43.
LUXEMBOURG	651	000	000	00	00	00	00	00	00	00	1	000	000	000	0000	000
MACAO	652	345	345	52	51	44	65	45	65	67	7	000	000	000	0000	53.
MACAU	360	000	000	00	00	00	00	00	00	00	219	51.	49.	49.	498.	000
MADAGASCAR	164	350	350	00	00	00	00	00	00	00	12	000	000	000	0000	000
MADEIRA	653	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
MALAWI	167	355	355	42	42	39	44	55	43	42	000	000	000	000	0000	43.
MALAYSIA	361	360	360	50	50	49	54	59	52	49	2491	57.	55.	56.	558.	63.
MALDIVES	364	000	000	37	00	00	00	47	00	34	000	000	000	000	0000	43.
MALI	170	363	363	36	48	37	44	64	40	33	2	000	000	000	0000	43.

COUNTRY	Codes			SCH ENR	HI-ED ENR	LITER-ACY	ENR-EXP PUPIL	EXP/LIND PRAC	TEL/ 000	NEWS-/000	N	TOEFL Data for 1976-1977 LIST-ENING	STRUC-TURE	READ-ING	TOT-AL	SCI-CAP
	TOEFL	GMAT	GRE													
MALTA	665	265	365	54	54	55	58	62	50	58	400	000	000	000	0000	62.
MARIANA ISLANDS	516	000	000	00	00	00	00	00	00	00	10	000	000	000	0000	000
MARTINIQUE	742	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
MARSHALL ISLANDS	519	000	000	00	00	00	00	00	00	00	100	43.	37.	38.	394.	000
MAURITANIA	171	364	364	34	00	35	48	50	39	49	1	000	000	000	0000	43.
MAURITIUS	345	370	370	52	42	51	53	54	54	54	10	000	000	000	0000	43.
MEXICO	743	375	375	51	53	52	53	50	54	56	1442	54.	49.	54.	524.	58.
MONACO	657	000	000	00	00	00	00	00	00	00	2	000	000	000	0000	000
MONGOLIA	367	000	000	49	60	56	00	51	52	54	3	000	000	000	0000	43.
MONACO	176	380	380	44	47	43	51	54	51	46	97	55.	54.	55.	549.	43.
MOZAMBIQUE	179	385	385	41	00	36	39	56	45	43	2	000	000	000	0000	43.
NAURU	526	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
NEPAL	370	410	367	39	47	39	39	58	00	35	67	51.	53.	53.	525.	43.
NETHERLANDS	658	390	390	64	66	64	64	63	65	62	374	63.	57.	59.	594.	64.
NETHERLANDS ANTI	744	395	395	00	00	00	00	00	00	00	70	61.	54.	54.	565.	000
NEW CALEDONIA	523	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
NEW ZEALAND	528	405	405	66	73	64	62	51	69	64	2	000	000	000	0000	57.
NICARAGUA	749	420	420	47	52	51	48	47	49	49	181	55.	48.	52.	515.	50.
NIGER	182	425	425	32	00	35	39	60	38	37	1	000	000	000	0000	43.
NIGERIA	183	430	430	41	43	47	39	67	41	39	4188	48.	53.	53.	515.	43.
NORWAY	661	435	435	64	56	71	67	38	66	64	397	61.	55.	55.	571.	58.
OMAN	373	000	443	00	00	00	00	00	00	00	40	51.	44.	43.	458.	000
PAKISTAN	376	445	445	42	52	44	39	56	42	41	1768	53.	52.	53.	524.	55.
PANAMA	752	450	450	56	58	54	57	49	55	59	284	53.	46.	50.	497.	50.
PAPUA-NEW GUINEA	545	600	600	46	46	00	00	52	47	00	8	000	000	000	0000	43.
PARAGUAY	822	455	455	50	00	53	42	65	48	50	24	57.	50.	55.	541.	51.
PERU	825	460	460	53	54	52	53	55	51	54	541	55.	50.	54.	530.	56.
PHILIPPINES	179	465	465	59	68	54	53	61	47	46	4868	54.	51.	54.	528.	56.
POLAND	669	470	470	61	61	60	60	36	56	57	163	55.	50.	52.	520.	65.
PORTUGAL	667	475	475	52	54	52	54	32	57	52	137	57.	51.	54.	539.	59.
PUERTO RICO	753	000	000	69	69	56	61	34	60	52	255	56.	50.	55.	537.	54.
QATAR	382	000	000	00	00	00	00	00	00	00	32	51.	41.	39.	437.	000
RHODESIA	184	480	460	49	43	44	46	54	54	43	98	55.	57.	55.	560.	43.
ROMANIA	671	483	483	62	59	64	59	49	54	55	96	54.	51.	54.	528.	57.
RWANDA	191	000	487	46	39	00	39	65	36	00	3	000	000	000	0000	43.
SABLA	537	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
SAN MARINO	676	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
SAO TOME AND PRI	192	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
SAUDI ARABIA	385	490	490	37	44	42	54	41	46	40	999	49.	43.	42.	446.	43.
SENEGAL	196	497	497	41	47	39	49	59	49	48	7	000	000	000	0000	43.
SEYCHELLES	195	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
SIERRA LEONE	197	500	500	38	45	42	44	63	44	45	46	50.	52.	51.	509.	43.
SINGAPORE	391	505	505	60	60	51	58	52	56	00	615	56.	54.	55.	550.	43.
SOLOMON ISLANDS	532	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
SOMALIA	201	507	507	32	39	37	39	47	00	42	28	49.	46.	47.	474.	43.
SOUTH AFRICA	206	510	510	53	54	48	55	68	58	52	31	58.	59.	59.	584.	59.
SPAIN	660	515	515	54	54	58	52	52	60	56	271	55.	52.	57.	547.	60.
SRI LANKA	194	520	520	00	00	00	00	00	00	00	257	56.	55.	57.	563.	000
SUDAN	207	525	525	36	46	43	44	60	45	40	119	49.	49.	50.	490.	43.
SURINAM	756	527	527	00	00	00	00	00	00	00	23	58.	52.	51.	538.	000
SWAZILAND	210	530	530	00	00	00	00	00	00	00	6	000	000	000	0000	000
SWEDEN	663	535	535	60	64	71	73	62	73	73	294	63.	56.	58.	590.	65.
SWITZERLAND	664	540	540	51	59	71	64	53	71	62	264	59.	54.	58.	578.	64.
SYRIA	390	545	545	49	57	40	55	48	53	56	173	53.	48.	48.	494.	43.
TAHITI	534	550	550	00	00	00	00	00	00	00	4	000	000	000	0000	000
TANZANIA	213	560	560	40	40	44	44	77	44	36	94	54.	54.	54.	542.	43.
THAILAND	401	565	565	46	50	53	44	56	44	46	4455	48.	46.	46.	465.	54.
TOGO	214	567	567	43	39	39	42	59	43	44	15	41.	40.	45.	419.	43.
TONGA ISLANDS	535	570	570	00	00	00	00	00	00	00	0	000	000	000	0000	000
TRINIDAD AND TOB	758	575	575	55	48	55	56	54	56	54	0	000	000	000	0000	43.
TUNISIA	219	580	580	51	50	47	53	46	51	48	44	51.	50.	49.	511.	51.
TURKEY	604	585	585	49	53	50	51	49	51	50	698	53.	48.	48.	504.	55.
UGANDA	222	590	590	43	43	46	46	73	44	44	57	55.	56.	54.	550.	43.
UNION OF SOVIET	668	485	485	59	71	64	66	57	92	61	3	000	000	000	0000	000
UNITED STATES	760	000	000	67	77	64	77	53	77	77	000	000	000	000	0000	77.
UPPER VOLTA	225	593	593	34	38	39	39	57	36	38	6	000	000	000	0000	43.
URUGUAY	826	595	595	59	57	58	51	47	58	62	83	55.	51.	55.	536.	57.
VATICAN	669	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
VENEZUELA	831	600	600	54	56	55	46	44	55	55	1143	52.	47.	51.	497.	55.
VIETNAM	407	605	605	50	51	52	51	49	42	51	1583	51.	48.	50.	497.	52.
VIRGIN ISLANDS	761	000	000	00	00	00	00	00	00	00	000	000	000	000	0000	000
WEST INDIES	764	615	615	00	00	00	00	00	00	00	1	000	000	000	0000	000
YEMEN SOUTHERN	410	000	623	30	00	00	44	32	48	57	48	51.	47.	46.	480.	43.
YUGOSLAVIA	692	625	625	57	62	55	57	61	54	54	179	54.	50.	51.	515.	61.
ZAIRE	224	630	630	00	00	00	00	00	00	00	31	43.	46.	47.	453.	000
ZAMBIA	231	635	635	45	00	49	46	64	50	40	11	000	000	000	0000	43.
CHINA TAIWAN	819	555	555	56	59	54	49	52	52	00	14673	49.	50.	51.	501.	58.
ENGLAND	672	180	180	00	00	00	00	00	00	00	000	000	000	000	0000	000
SCOTLAND	622	695	695	00	00	00	00	00	00	00	000	000	000	000	0000	000
WALES	622	610	610	00	00	00	00	00	00	00	000	000	000	000	0000	000
CANARY ISLANDS	665	105	105	00	00	00	00	00	00	00	000	000	000	000	0000	000
MELANESIA	902	640	640	00	00	00	00	00	00	00	000	000	000	000	0000	000
WESTERN SAMOA	903	620	620	00	00	00	00	00	00	00	44	53.	46.	46.	483.	000
MALAGASY REPUB	904	000	000	45	46	48	48	41	46	47	000	000	000	000	0000	43.
CEYLON	905	000	000	58	49	54	49	52	46	47	000	000	000	000	0000	52.

*This table includes the names of countries in the TOEFL Native Country File followed by (a) numeric codes used by the TOEFL, GMAT, and GRE Testing Programs, (b) converted ranks of countries of the world on selected social and economic indicator variables (Taylor and Hudson, 1972), (c) TOEFL volume for 1976-77, and (d) mean TOEFL scores for candidates tested during that year.

The indicator variables are school enrollment rate, higher education enrollment rate, literacy rate, educational expenditures per capita, Index of Ethnic and Linguistic Fractionalization, telephones per 100,000, newspapers per 100,000, and scientific capacity (last column in the table). The values reported are standard scale conversions (mean = 50 and standard deviation = 10) of the percentile ranks of countries, as reported by Taylor and Hudson, on the indicators. Thus, for example, Ceylon has a converted rank of 58 under SCH ENR, indicating that this country is about 0.8 standard deviations above the average for all countries on this variable; in higher education enrollment the standard score of 49 indicates about average standing, etc.

TABLE A.2

MISSING DATA INTERCORRELATIONS, WITH NATIVE COUNTRY AS THE UNIT OF ANALYSIS, OF EIGHT SOCIAL AND ECONOMIC INDICATOR VARIABLES, AND MEAN SCORES OF TOEFL CANDIDATES FOR 1976-77[a] (N = 88-107)

Correlations among variables in country file with all countries

Missing data correlations for country file — variables

Correlations for country file — variables

	SCHENR	HIGHED	LITRCY	EDUEXP	GLPROC	TELEPHNS	NEWSPAPR	MIL.CAMB.	LISTEN	WRITE	READ	TOTAL	SCICAP
SCHENR	98.	92.	97.	98.	98.	94.	93.	91.	93.	93.	93.	93.	98.
	1.0000	.9406	.9126	.9000	.9000	.9518	.9049	.8688	.9273	.9273	.9273	.9273	.9000
	.9000	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.0065	.7156	.0600	.0065	.0065	.0668	.0975	.0065	.0390	.0390	.0390	.0390	.0065
	.0065	.7509	.5030	.0069	.5030	.1907	.0950	.2584	.0153	.0034	.1701	.7366	.2202
	1.0000	.7377	.6291	.7930	-.3688	.7252	.7498	.6812	.5405	.3282	.4167	.6409	.6241
HIGHED	93.	93.	93.	93.	93.	89.	88.	93.	93.	90.	90.	90.	93.
	.9406	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.9400	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.7156	.7156	.7156	.7156	.7156	.7156	.7156	.7156	.7156	.7156	.7156	.7156	.7156
	.7509	.7509	.7509	.7509	.7509	.7509	.7509	.7509	.7509	.7509	.7509	.7509	.7509
	.7377	1.0000	.7685	.7500	-.3987	.7200	.7250	.6939	.5628	.3623	.4337	.6449	.7272
LITRCY	97.	93.	97.	97.	97.	93.	92.	97.	92.	93.	92.	92.	97.
	.9126	.9691	.9691	.9691	.9691	.9518	.9049	.8688	.9273	.9273	.9273	.9273	.9691
	.9691	.9765	.9691	.9691	.9691	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9691
	.5030	.4920	.5030	.5030	.5030	.3068	.1656	.3238	.5217	.5217	.5217	.5217	.5030
	.5030	.7156	.5030	.5030	.5030	.3068	.1656	.3238	.5217	.5217	.5217	.5217	.5030
	.6689	.7685	.5030	.6078	.5030	.2225	.0221	.2599	.6182	.4207	.4092	.4643	.2078
	.6291	.7685	1.0000	.8205	-.6454	.8419	.6474	.6812	.5405	.3282	.4167	.6409	.6241
	.6291	.7685	1.0000	.8205	-.6454	.8419	.6474	.0175	.6961	.6359	.5102	.5936	.7452
EDUEXP	98.	93.	97.	98.	98.	94.	93.	98.	93.	93.	93.	93.	98.
	.9000	.9275	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.9000	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.6689	.7156	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689
	.6689	.7509	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689
	.7509	.7500	.8205	1.0000	-.3666	.8803	.8756	-.0681	.6889	.5239	.3545	.6424	.9716
GLPROC	98.	93.	97.	98.	98.	94.	93.	98.	93.	93.	93.	93.	98.
	.9000	.9003	.9604	.9000	.9000	.9457	.9035	.8688	.9273	.9273	.9273	.9273	.9000
	.9000	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.3068	.3068	.3068	.3068	.3068	.3605	.4009	.3068	.3068	.3068	.3068	.3068	.3068
	.6689	.7156	.5030	.6689	.5030	.1907	.0950	.2584	.0153	.0034	.1701	.7366	.2202
	-.3688	-.3987	-.6454	-.3666	1.0000	-.4139	-.4494	-.0338	-.2205	.1078	.0047	-.0655	-.3479
TELEPHNS	94.	89.	93.	94.	94.	94.	89.	94.	90.	90.	90.	90.	94.
	.9518	.9604	.9518	.9518	.9518	.9457	.9604	.8688	.9273	.9273	.9273	.9273	.9518
	.9604	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9604
	.1907	.1907	.1907	.1907	.1907	.1907	.1907	.1907	.1907	.1907	.1907	.1907	.1907
	.6689	.7156	.5030	.6689	.5030	.1907	.0950	.2584	.0153	.0034	.1701	.7366	.2202
	.7252	.7200	.8419	.8803	-.6454	1.0000	.8788	-.0338	-.2205	.1078	.0047	-.0655	-.3479
NEWSPAPR	93.	88.	92.	93.	93.	89.	93.	93.	91.	89.	89.	89.	93.
	.9049	.9137	.9049	.9049	.9049	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9049
	.9137	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9137
	.6689	.7156	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689
	.6689	.7509	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689
	.7252	.7200	.8419	.8803	-.6454	1.0000	.8788	-.0338	-.2205	.1078	.0047	-.0655	-.3479
MIL.CAMB.	91.	93.	97.	98.	98.	94.	93.	115.	107.	107.	107.	107.	98.
	.8688	.7841	.8688	.8688	.8688	.8688	.7841	.8688	.7841	.7841	.7841	.7841	.8688
	.9137	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9137
	.6689	.7156	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689
	.6689	.7509	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689	.6689
	.6812	.7685	.6812	.6812	.6812	.6812	.6812	.6812	.6812	.6812	.6812	.6812	.6812
LISTEN	93.	90.	92.	93.	93.	90.	88.	107.	107.	107.	107.	107.	93.
	.9273	.9396	.9273	.9273	.9273	.9273	.9396	.9273	.9273	.9273	.9273	.9273	.9273
	.9396	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9396
	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.6812	.5405	.3282	.4167	.6409	.6241
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.0175	.6961	.6359	.5102	.5936	.7452
WRITE	93.	90.	92.	93.	93.	90.	88.	107.	107.	107.	107.	107.	93.
	.9273	.9396	.9273	.9273	.9273	.9273	.9396	.9273	.9273	.9273	.9273	.9273	.9273
	.9396	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9396
	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.6812	.5405	.3282	.4167	.6409	.6241
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.0175	.6961	.6359	.5102	.5936	.7452
READ	93.	90.	92.	93.	93.	90.	88.	107.	107.	107.	107.	107.	93.
	.9273	.9396	.9273	.9273	.9273	.9273	.9396	.9273	.9273	.9273	.9273	.9273	.9273
	.9396	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9396
	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.6812	.5405	.3282	.4167	.6409	.6241
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.0175	.6961	.6359	.5102	.5936	.7452
TOTAL	93.	90.	92.	93.	93.	90.	88.	107.	107.	107.	107.	107.	93.
	.9273	.9396	.9273	.9273	.9273	.9273	.9396	.9273	.9273	.9273	.9273	.9273	.9273
	.9396	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9396
	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217	.5217
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182	.6182
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.6812	.5405	.3282	.4167	.6409	.6241
	.6939	.7685	.6961	.6865	-.6255	.8419	.6474	.0175	.6961	.6359	.5102	.5936	.7452
SCICAP	98.	93.	97.	98.	98.	94.	93.	98.	93.	93.	93.	93.	98.
	.9000	.9275	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.9000	.9765	.9691	.9275	.9000	.9604	.9137	.7841	.9396	.9396	.9396	.9396	.9000
	.6689	.7156	.5030	.6689	.5030	.1907	.0950	.2584	.0153	.0034	.1701	.7366	.2202
	.6689	.7509	.5030	.6689	.5030	.1907	.0950	.2584	.0153	.0034	.1701	.7366	.2202
	.7252	.7200	.8419	.8803	-.6454	1.0000	.8788	-.0338	-.2205	.1078	.0047	-.0655	-.3479
	.6291	.7272	.7452	.5716	-.3479	.6340	.6492	.1062	.4478	.3594			

[a]The indicator variables are school enrollment rate, higher education enrollment rate, literacy rate education.l expenditures per capita, Index of Ethnic and Linguistic Fractionalization, telephones per 100,000. newspapers per 100,000, and scientific capacity (last column). Scores are converted ranks, scaled so that the mean for all countries is 50 and the standard deviation is 10.

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